Smithsonian

July 1987

Fish and Flowering Branch, a stained-glass masterpiece,
is only a sample of John La Farge's artistic range (p. 46)

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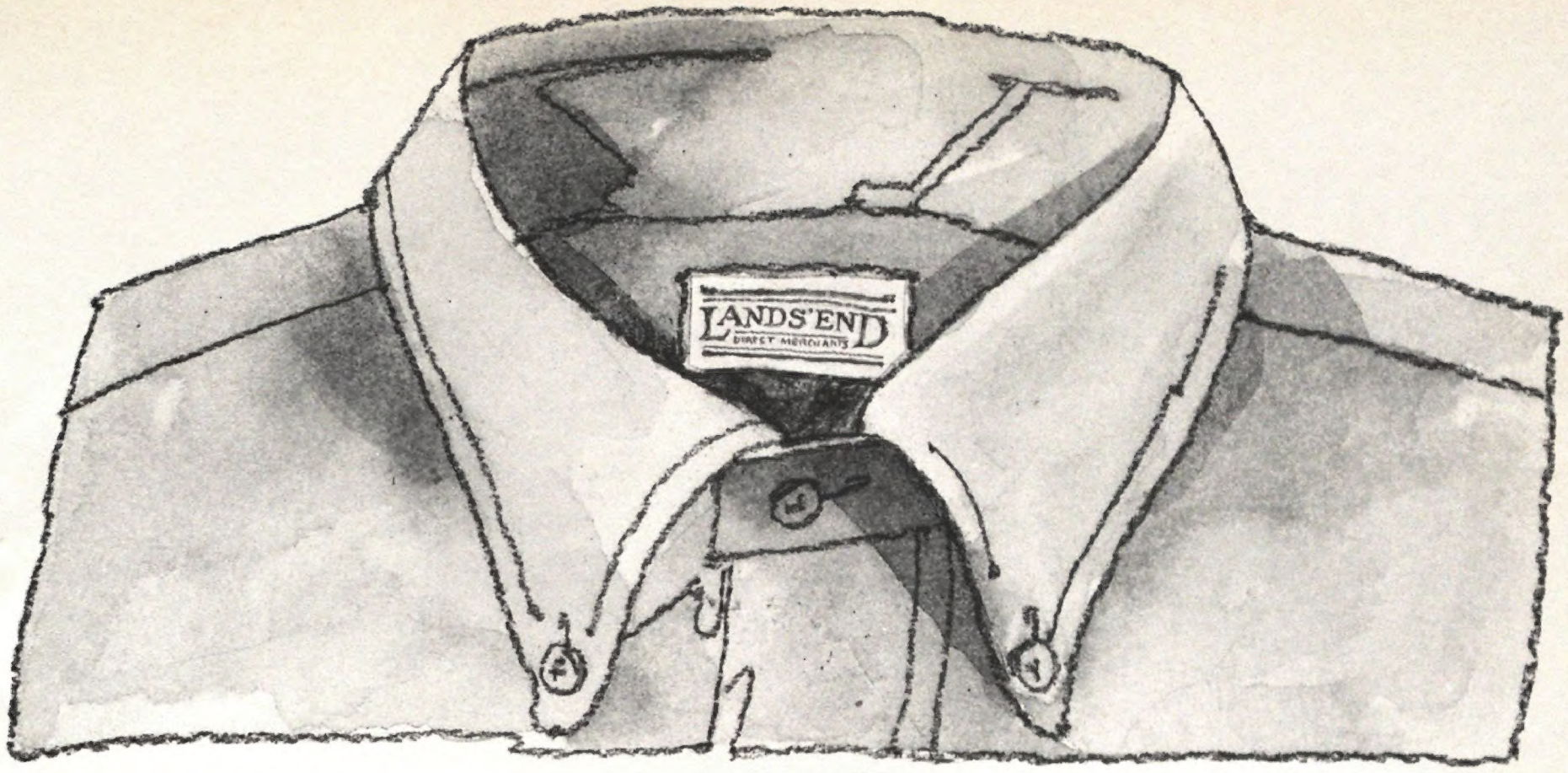

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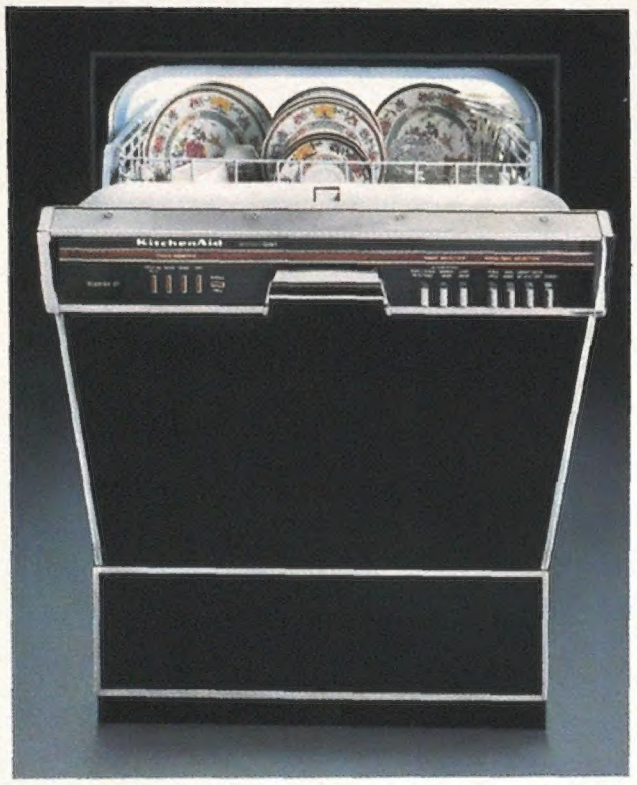

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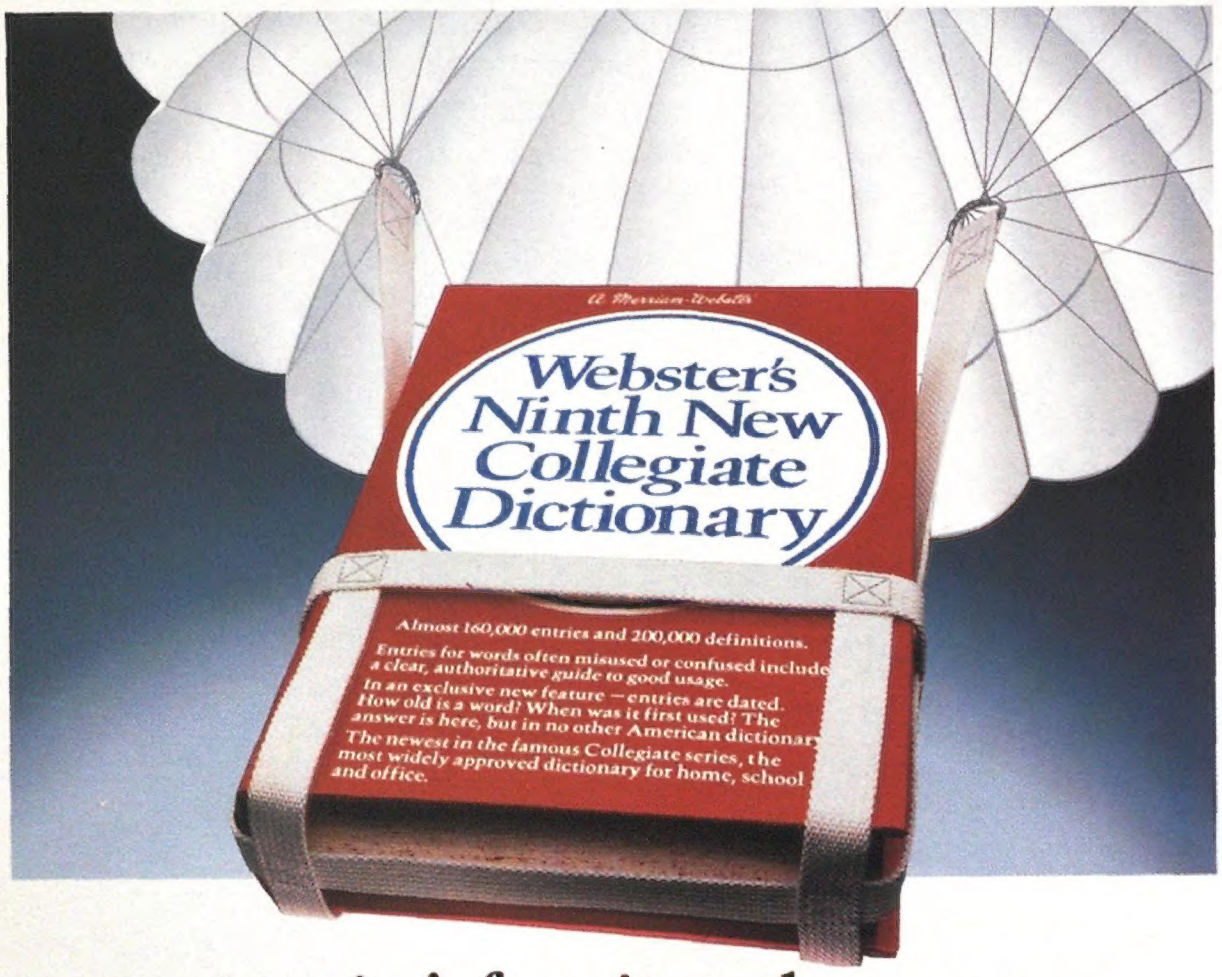
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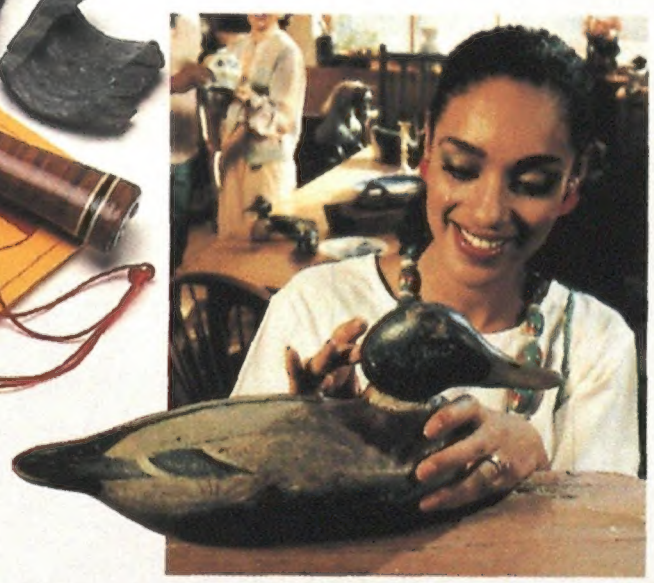

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Secretary Adams' comments

Smithsonian horizons

The inventions that change our lives often meet with indifference, even active resistance—as did the jet engine

"Is it possible," wrote historian Elting Morison some years ago, "if one sets aside the long-run social benefits, to look upon invention as a hostile act—a dislocation of existing schemes, a way of disturbing the comfortable bourgeois routines and calculations?"

He then detailed a number of 19th-century instances of the shortsighted, uncomprehending or outright negative receptions such acts were given. Key decisionmakers typically "discouraged the impulses of the technical men to introduce, beyond the point where they could obtain immediate and temporary advantage, technical advances. They restricted current information and prevented the development of sources for new information with all the obscurantism of the absolute monarch uncertain of his throne." What makes the tale worth telling is that all the inventions were of seemingly obvious, and certainly lasting, importance.

Sir Frank Whittle and Hans von Ohain, independent inventors of the jet engine, have recently been honored as recipients of the National Air and Space Museum Trophy. Their discoveries, on the eve of World War II, came too late for operational models of jet aircraft to have a significant influence on the war's outcome.

One can speculate on how things might have worked out if acceptance had been readier, or the lag for further testing and development shorter, in England and Germany respectively. We could also trace the profound influence that the jet rapidly attained over the world's military forces and strategies, and fundamental patterns of movement, intercommunication and economic life. But let us instead carry forward the Morison account, into the reception that was given to an invention of this importance on the very threshold of our own era.

Although substantial further improvements in airframes were envisioned by the mid-1930s, it had become clear that limits on the speed attainable with propellers as a propulsion system were fast approaching. A replacement for the piston engine and propeller combination would seem almost certain to have become a top military, if not commercial, priority. This was surprisingly not the case in Britain or Germany (or even in the United States).

Whittle, an officer pilot with a consuming interest in the subject and a flair for engineering improvements, was repeatedly rebuffed over a period of years by a number of industrial firms as well as his own Air Ministry. What saved the day, apart from his own amazing persistence, were a handful of small-scale but visionary entrepreneurs, a few superior officers who understood and sympathized with his objective and were prepared to bend the rules for him, and the ability and dedication of the coworkers who gathered around him.

But high-level indifference, and even active resistance, continued long after the balance of testing had shifted to show the jet engine's decisive superiority. Even after the end of the war, with the new course of development universally recognized, Whittle notes somewhat bitterly that by ministerial decision his small company was swallowed up, so that "those who had originated and developed the jet engine and its derivatives were stripped of their rights to continue such work."

Von Ohain's experience included at least a few similar elements. His interest, too, began with an urge to find an alternate propulsion system with a higher thrust-to-weight ratio. Added to his talents were those of a head mechanic and machinist at a local garage with an outstanding knowledge of production methods. At von Ohain's expense, the two assembled a first working model that held some promise even while being deficient in fundamental respects. In an atmosphere of indifference, one unconventional aircraft manufacturer came forward with support.

This von Ohain managed to solidify by opting for a somewhat cynical but effective two-level approach. On the one hand, largely for psychological effect, a very simple engine was constructed that demonstrated the feasibility of jet propulsion by using hydrogen gas as a fuel. With the added time and enthusiasm secured in this way, he was finally able to solve the much more difficult problem of designing combustion chambers that would permit the use of a practical, liquid hydrocarbon fuel. But even when the latter had been demonstrated, the upper echelons of the Air Ministry and much of the engine industry remained skeptical or uninterested for several years more, into the early '40s.

There are some obvious lessons in all this. Inventions, especially visionary ones that disturb established patterns, rarely diffuse rapidly and successfully of their own accord. Different talents for technical innovation, organizational leadership, intrigue and plain, unbending stubbornness are called for at different phases in their acceptance. Centralized, bureaucratic managers and industrial giants are alike in too often being obstacles to, rather than sources of, broader perspectives. Enmeshed in present constraints, higher echelons fail to notice that most future problems and solutions lie outside of this framework.

We salute Whittle and von Ohain for pioneering engineering achievements of outstanding importance, made from modest and generally discounted beginnings. But have we yet fully overcome the organizational and attitudinal barriers they encountered, where the biggest, most highly placed and most secure were also so frequently averse to risk?

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Letters to the Editor

The Great Migration

Dear Sir: Upon reading the caption for the photograph of the young Layton brothers on page 81 of your May issue, I realized that they were distant cousins of mine. My grandfather and their mother were brother and sister in my hometown of Richmond, Virginia.

I immediately shared the article with my 17-year-old daughter, wanting her to be aware of her place in the history of this country. Growing up in Andover, Massachusetts, she has felt excluded in history discussions, except for events that she conceived as unpleasant or embarrassing when discussed before her white classmates. This exhibit is one to which millions of young black Americans will be able to instantly relate. They can look into the faces of the photographs exhibited and find a beloved grandmother, grandfather, aunt or uncle as I did, or reflections of their own faces, and once drawn in they can then begin to objectively and critically examine their own heritage and discover a renewed sense of ethnic pride and strength.
Alease Sully Bruce, PhD
Andover, Massachusetts

Quilts

Dear Sir: In 1982, Justine Merritt of Denver envisioned a ribbon of needlework wrapped around the Pentagon to commemorate the 40th anniversary of the bombing of Hiroshima. Three years later, in August 1985, its 25,000 segments constituted a ribbon that stretched for miles from the Capitol—along the Mall, to the Ellipse, the Reflecting Pool, the Lincoln Memorial, then across the Potomac—to the Pentagon, a plea for universal peace. It was stitched, more in quilting than in any other medium, by many groups and individuals from all over the world—surely the largest quilting bee in history!
Jan Stephens
Cleveland Heights, Ohio

Dear Sir: My mother, born in Howell County, Missouri, in 1886, used to tell about having helped to make a quilt for her "hope chest" when she was 10 years old. One day, after taking a break, she couldn't find her needle, and was scolded severely for her carelessness. Such items were hard to come by in that part of the Ozarks.

Lying abed one morning 30 years later under that same quilt, I ran my hand over the intricate pattern and was pierced painfully by something sharp—the lost needle, severely rusted but with a 10-inch strand of thread still in its eye!
Tom E. Clark
Seattle

Dear Sir: A new museum dedicated to American quilts and quilting will open in December in Marietta, Pennsylvania.

Its "charter collection" consists of ten exemplary quilts donated by citizens of Marietta. Also, the museum will be a national educational center for professionals, scholars and others involved in researching quilt history, production and design, and in collecting or just viewing.
Denise M. Sater
Marietta, Pennsylvania

Dear Sir: Although I applaud the recognition of the brand new LACMA quilt-research center, I was disturbed by the statement, "Historical study of quilts has only recently begun, led by LACMA. . . ."

It should be pointed out that the American Quilt Study Group, a national nonprofit organization, has sponsored a seminar and published a book of research papers on quilt history annually since 1980.
Meg Malloy, Assistant Director
American Quilt Study Group
Mill Valley, California

Dear Sir: Quilt National, the first juried exhibition devoted to the work of innovative quiltmakers, was established in 1979 because Athens artists Nancy Crow and Françoise Barnes—who now have worldwide recognition—were barred from traditional quilt shows, since their work was not to be used as bed covering.

That the "art quilt appears to be snubbing its country cousin" had nothing

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to do with it. I have yet to meet a contemporary quiltmaker who intends his or her work to be a statement of superiority rather than an outgrowth of the lessons taught by earlier quiltmakers.

People who make quilts have always known that they are art. But it is only within the last decade that those works of layered stuffed fabric intended for wall hangings have been considered quilts.
Hilary M. Fletcher, Coordinator
Quilt National
Athens, Ohio

Garden of Eden

Dear Sir: Although I have long thought that the Garden of Eden was in Lebanon, I find Dr. Zarins' study convincing, particularly in his reliance on linguistics in supporting his theory.

For many years I have been researching the life and times of Gilgamesh, the Sumerian god-king, and have incorporated my love of Sumerian literature and quilting in a tapestry depicting his epic, among the oldest known to Man.

As for Ralph Lauren's having cut up antique quilts to make haute couture garments, in retaliation I cut up a Ralph Lauren shirt and made a wall quilt. Called "Tit for Tat, Ralph Lauren," it has embroidered puns on the borders chiding him for his action. "Sew long, Ralph Lauren. It's been good to no-no you."
Virginia Ferrill Piland
Spring, Texas

Titanium

Dear Sir: I'd like to point out another industry that uses titanium extensively. Because the metal burns with a brilliant white flame, makers of fireworks have employed it for several years. A small amount of sponge titanium added to any color formula used in an aerial firework embellishes the visual effect with a shimmering white lace of fire. And anyone who has been to a pyrotechnic display recently will remember the brilliant white "cloud of snow" that accompanies the loud aerial salutes. Titanium has afforded yet another color and texture with which to paint the night sky.
James C. Widmann
Connecticut Pyrotechnic Display Co.
South Norwalk, Connecticut

Dear Sir: Yet another important use of this marvelous metal is by the Greek team of experts who are restoring the ancient monuments on the Acropolis in Athens [SMITHSONIAN, March 1982]. Rods of strong, light, rustproof titanium are replacing rusted iron dowels, used in previous attempts at conservation.
Doreen C. Spitzer, President
Trustees of the American School of Classical Studies at Athens
New York City

Cattle egrets

Dear Sir: Your article called to mind an eloquent description of this bird appearing in *The Comments of Moung Ka* by Saki: "In the bright-green swamp, which was really a rice-field when you looked closely at it, bitterns and pond-herons and elegant cattle-egrets stalked and peered with the absorbed air of careful and conscientious reptile-hunters, who could never forget that, while they were undoubtedly useful, they were also distinctly decorative."
John S. Harris
Springville, Utah

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Around the Mall and beyond

Parents! Do you have a youngster who puts turtles in the bath, who raises praying mantises in the living room, whose pockets are apt to be crammed with beetles, bullfrogs or bits of broken birds' eggs? If so, you may be rearing a future director of the National Museum of Natural History.

Our new administrator of this stately old museum admits to such a childhood. "I knew by the fifth grade," says Robert S. Hoffmann, "that I wanted to get into biology. Fortunately I had a teacher who recognized my fascination with nature and encouraged it."

That was back in La Grange, Illinois, the western suburb of Chicago that, more than any of half a dozen other early homes, Hoffmann associates with his childhood. "My father was a civil engineer and moved about quite a bit," he explained to me. But it was from La Grange that Hoffmann set off on the first leg of a career that led him to this spacious old office overlooking the Mall.

One morning when he was 11 he pedaled his bike over to the Brookfield Zoo, confronted the director and asked for a job. He got one—selling peanuts. "I developed an allergy to peanuts," he admits, "but at least I was working at the zoo." At the same time his closest boyhood friend also landed a job. He was hired as a "gofer" at the Field Museum of Natural History. "He trundled bottles of snakes around," says Hoffmann. "Of course we would often visit each other, and that way I got to know the museum."

World War II produced more moves for the Hoffmanns. Robert's father joined the Naval Reserve and the family followed him to Asbury Park, New Jersey. "There," says his son, "I developed a new interest. I used to bike along the coast and inland, spotting birds."

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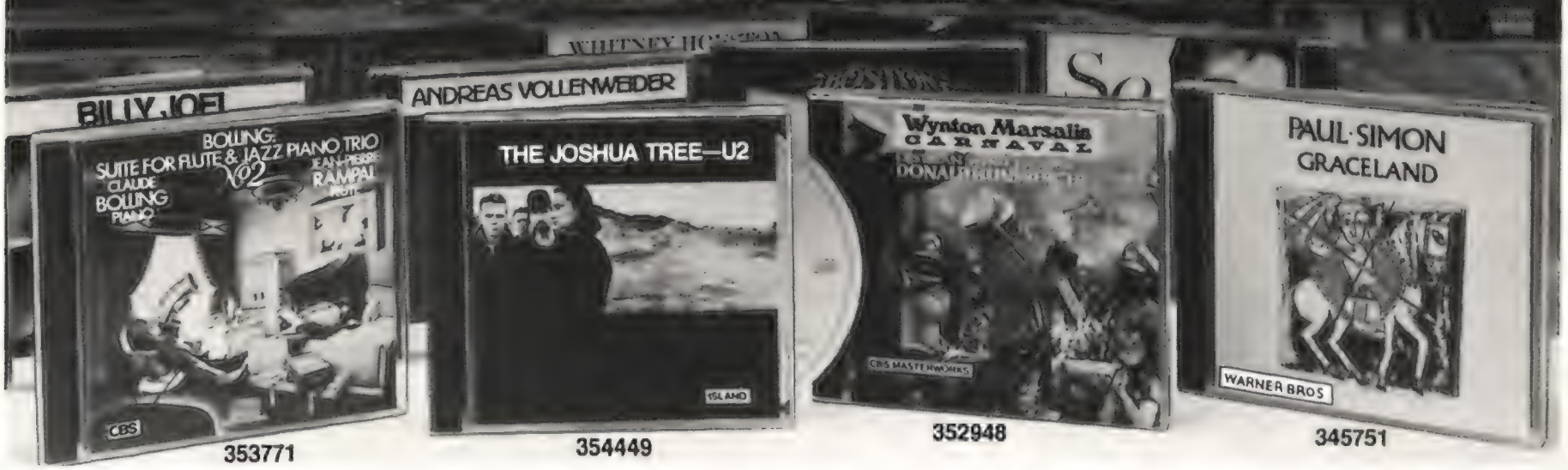

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The war had ended when Robert started college at the University of Illinois. Sophomore year he transferred to the University of Montana at Missoula and finished up at Utah State, which had good biology and wildlife programs. In graduate school at the University of California, Berkeley, he started a project dealing with one population of blue grouse. "The university owned a field station north of Lake Tahoe, and I was there for four summers."

At first there were no facilities for students, so Hoffmann camped out. Then he moved to nearby Truckee, just below Donner Pass. Since the project required frequent visits, he'd go up in the winters, too. "I found I could drive to the logging village of Hobart Mill," Hoffmann recalls, "and then ski into the area where I was doing research, packing in enough gear to spend a couple of nights." He'd been a skier since childhood, starting out on the golf courses of La Grange.

His study of blue grouse winter ecology sent him shinnying up evergreen trees, with the help of climbing irons, to check what the birds were eating. "I could tell the food trees by the amount of grouse droppings underneath."

After about a year he found "there weren't enough grouse for the kind of population study I was after. But I saw that the voles in those mountain meadows were going through exactly the population cycles I wanted to follow."

New museum director Hoffmann is much at home in small mammal collection.

As everyone except me has undoubtedly always known, a vole—genus *Microtus*—is really a field mouse. The creature prospers in cool climates, breeding like mad, overpopulating, then "crashing." That's the cycle Hoffmann was after.

He traced the population cycles in three isolated mountain meadows. He tried applying commerical fertilizer to the smallest of these—about five acres—and found that doing so staved off the population crash for about five months. "I have never found another opportunity to replicate that finding," he says, "but other people have found evidence that nutrition is an important factor in controlling vole populations."

Just what happens during one of these cycles? "In a period of low population," he told me, "female voles start breeding younger than usual. That raises the number of babies, and their survival rate is high. Their chief predator is the ermine, slender enough to track them through their snow tunnels (voles don't hibernate, but remain active under the snow).

"By the next year, the total population is way up. The huge growth in numbers then seems to inhibit the females from breeding. At the same time, their mortality rate and that of the youngsters jumps. And suddenly, down goes the population."

I wondered, of course, if we humans can expect this kind of natural reaction to our own overpopulation. "We do tend to stop breeding under really severe conditions, such as extreme stress or starvation," Hoffmann said, "but isolation itself is an inhibitor. The lonely lighthouse keeper secretes less testosterone, the sex hormone, when he's on duty. When he goes to town and sees people—sees women—he's back to normal."

Armed with a doctorate in 1955, Hoffmann joined the University of Montana and began studying the interaction of closely related vole species. He has long focused on mammals alone—ground squirrels and marmots as well as voles and shrews. His study of alpine ecology has led him into the study of Arctic ecology, and also into correspondence with colleagues in the Soviet Union. When, in 1962, the National Academy of Sciences and the Academy of Sciences of the USSR renewed their exchange agreement, he was quick to apply. For ten months he lived in Leningrad with his wife, Sally, and their four children.

Political tensions with China barred Hoffmann from fieldwork in Russia's Tien Shan mountains, which border the Chinese province of Xinjiang. But the rapport that grew during that first visit eased the way for many subsequent trips. "I've been back about a dozen times," he says, "studying small mammals in the Soviet Arctic and in the high mountains. The Soviet government seems to be convinced that I'm not an agent."

Robert Hoffmann comes to us from the University of Kansas, where he had been on the faculty for 17 years. His appointment as director of the Natural History Museum broke a long Smithson-

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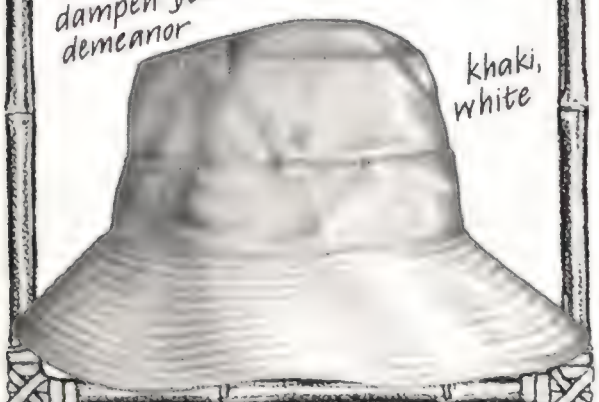

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ian tradition of selecting only insiders to that position, keeping them there for five years, then rotating them back to their research labs.

"I've agreed that my position should be reviewed in five years," Hoffmann told me. In the meantime, he'd like to make the museum's research programs more visible to the public. "People think of us in terms of stuffed animals. They don't realize that this museum is the world's largest research center for systematic biology and anthropology."

How to highlight the science profile? "I'd like to find ways to indicate what goes on behind those doors marked 'Staff Only.' Maybe we could do it by graphics; maybe a picture window like the one beside the coral reef exhibition. We can certainly do more 'working exhibits' like the one in Paleontology, where people can see investigation in progress." He looks for improvements in various exhibits, for overall planning for the future, for more interaction with universities, and more museum money.

This first "outsider" director tries to reach his Smithsonian office before 8, and leave it at 5:30. When no after-hours event interferes, he puts in about two hours of pretty heavy reading at home. He skis when he can: some cross-country, these days, but he still prefers downhill. Aside from that, "most of my exercise comes from avoiding elevators."

He and Sally live in a Maryland suburb. The children have grown up. Their youngest, Brenna, is now deeply involved in biology and environmental science. Sure, she used to help her dad catch ground squirrels in northern Siberia when she was a little kid.

Next month, if everything works out, Hoffmann will be off into the field again. This time it's China—Qinghai Province, once part of Tibet. He foresees lots of interesting mammals at elevations around 12,000 feet. "I'm not into conquering peaks," he says. But I'm not so sure.
Edwards Park

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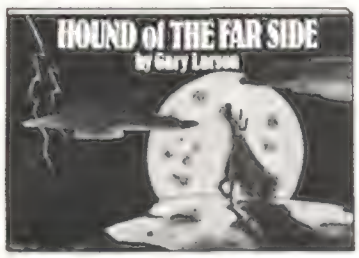

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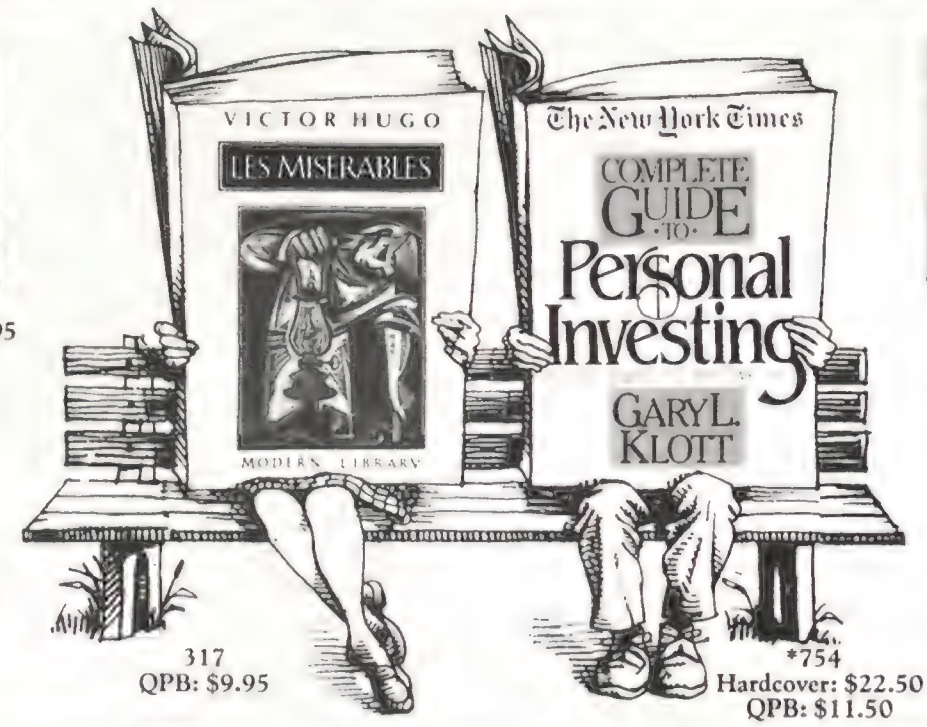

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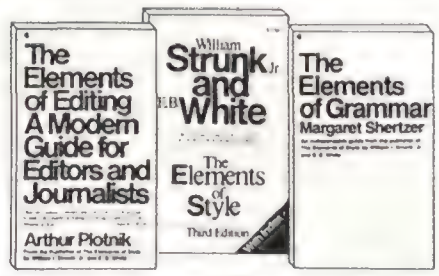

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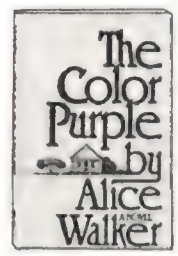

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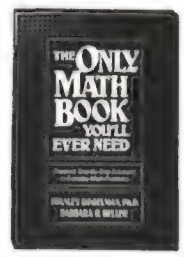

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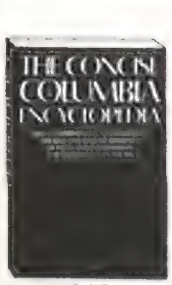

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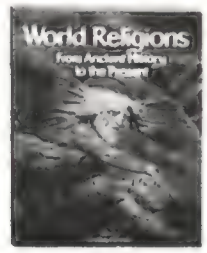

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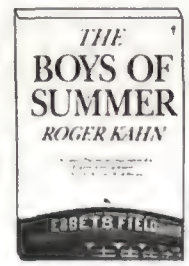

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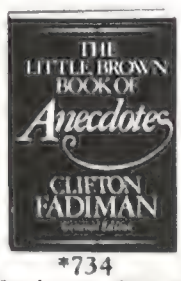

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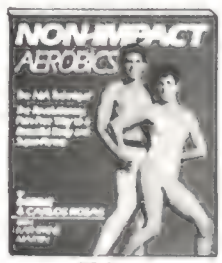

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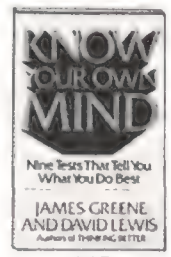

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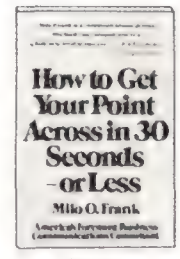

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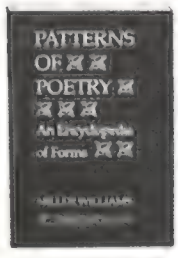

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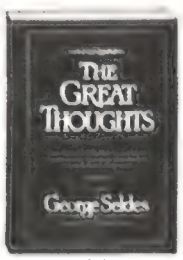

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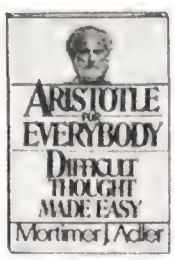

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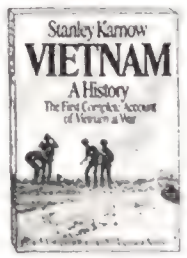

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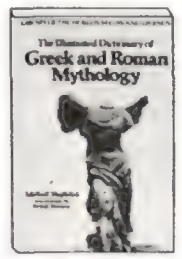

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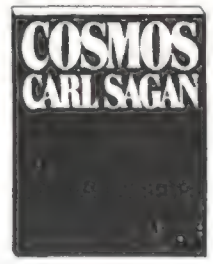

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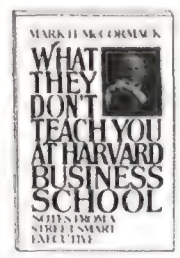

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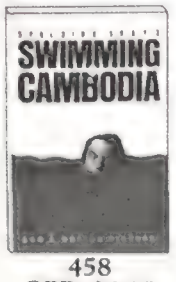

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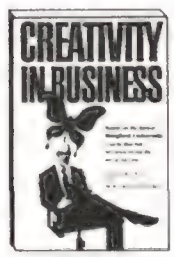

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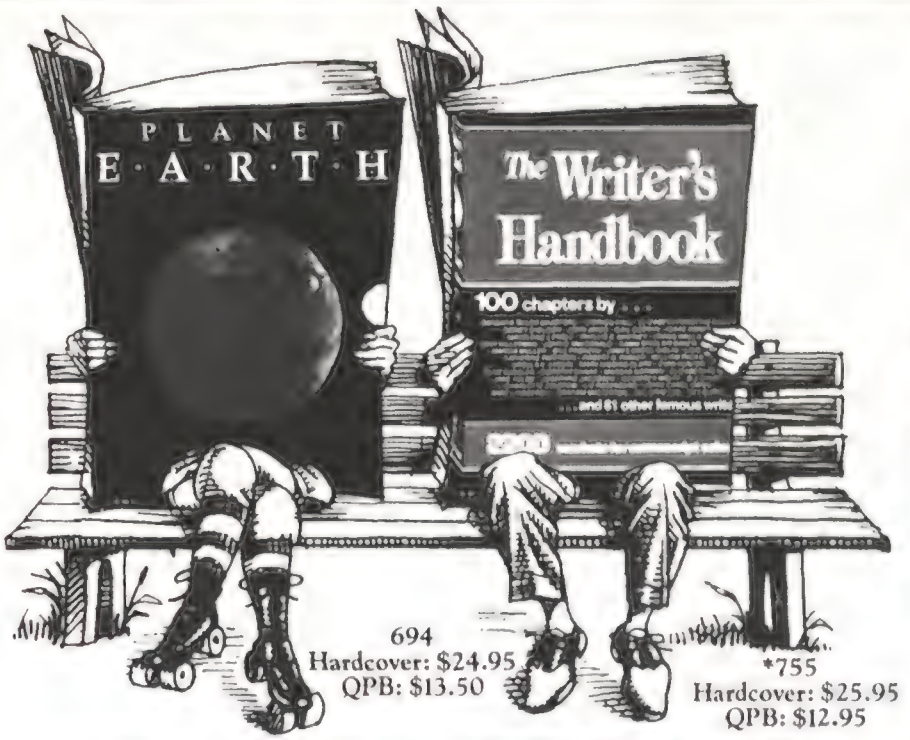

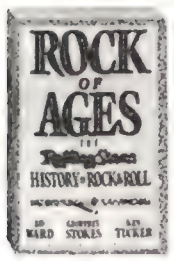

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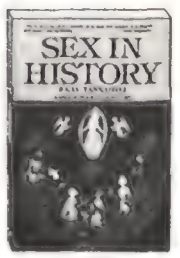

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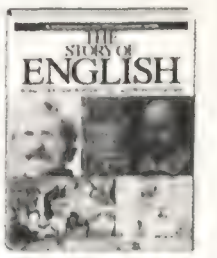

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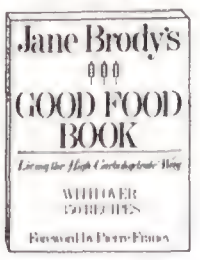

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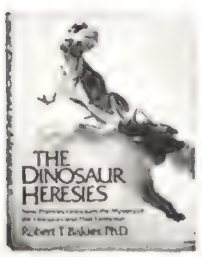

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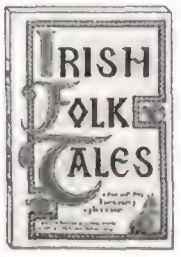

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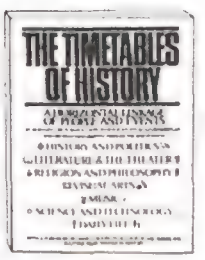

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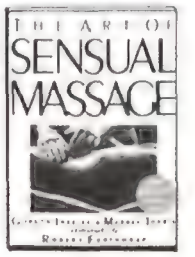

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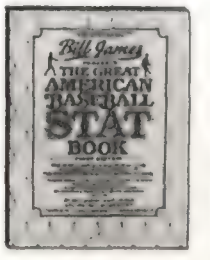

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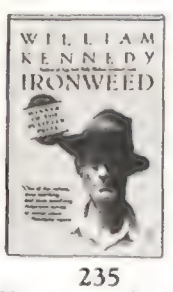

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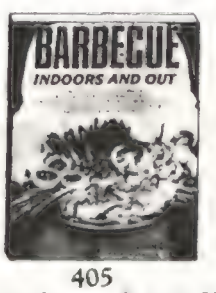

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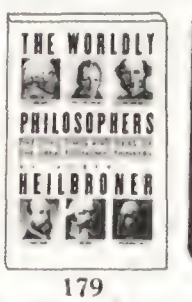

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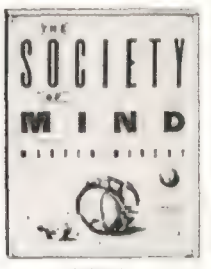

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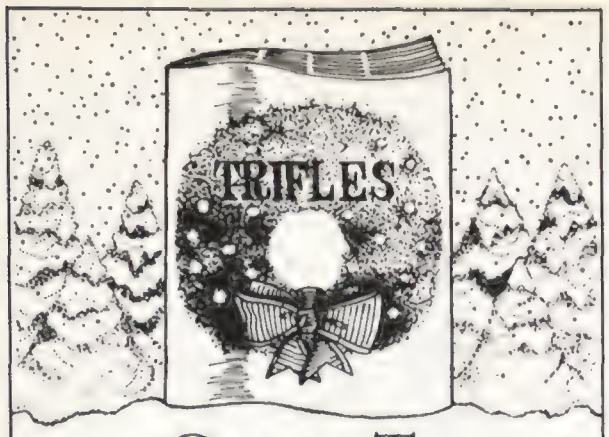

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Phenomena, comment and notes

A network of green corridors, threading its way through city and countryside, is proposed by a Presidential commission

Green space ranks up there with baseball and apple pie: right-thinking people everywhere recognize them as indisputably virtuous, manifestations of the "good" that by our very natures we seek. The prewar generation drove out into the country on Sundays. The postwar generation moved to the suburbs to live on plots of green space all their own. Today we crowd what green space we can find, whether we carry a pack across the backcountry or walk the dog in a neighborhood park. Cities are where the excitement is, but most Americans find they crave a little green.

When they head for the green these days, the odds are it will be crowded. On a summer weekend, parking lots will be full and late arrivals will be parked everywhere along the highway, in the bushes, perched precariously on steep banks. Picnic grills are all long appropriated, playing fields packed. Trails are busy, voices coming from every direction. Green it may be, where not trampled to dirt, but hardly tranquil.

Now, at a time when budgets on every level of government are being cut, we have the report of the President's Commission on Americans Outdoors. The Commission spent two years gathering reports and surveys, listening to the experts, holding public hearings around the country, studying case histories. Originally the Commission was boycotted by many conservation and environmental groups who feared it would not go far enough. Later it was sued by business groups, who contended it had gone too far. If everybody's mad, it must have done something right.

The Commission found, to no one's surprise, that Americans *do* love the outdoors. Walking for pleasure is the top-rated outdoor activity, with 84 percent of the population above the age of 12 saying they walk for fun at least sometimes, and fully half saying they walk often or very often. Picnicking and swimming outdoors tied at 76 percent, fishing came in just beyond 50 percent, with bicycling at 46 and camping at 45. Thirty-five percent of those sampled said they went outdoors to watch birds or study nature, while 22 percent said they went canoeing, kayaking or rafting. (Canoeing may be the fastest growing outdoor sport in America, up more than 500 percent since 1960.)

More and more of this recreation is in the form of short trips, less than a day. The drive across the country or the two-week vacation at one scenic spot is a fading memory. One Commission graph shows that the percentage of outdoor-recreation trips that take six hours or less total time away from home has grown from 25 percent in 1960 to almost 55 percent in 1985. The number of trips taking five or more days has dropped from 40 percent to 10 percent. Another chart shows that overnight trips of 100 miles or less almost quadrupled from 1972 to 1982, while trips of 500 miles or more dropped by more than 92 percent.

People want their green close to home. To me, the Commission's most exciting recommendation is its most general one:

Rainy-day cyclist heads up a trail in Virginia that once was a railroad line.

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that communities across the nation establish more greenways. These are defined as "corridors of private and public recreation lands and waters, to provide people with access to open spaces close to where they live, and to link together the rural and urban spaces in the American landscape." The Commission asks us to imagine being able to walk out our front door and within minutes set off on a continuous network of corridors that could someday reach across the entire United States.

The greenways are "fingers of green" that come in many different forms: "biking and hiking trails along abandoned rail lines; boating and fishing sites on ribbons of bright water restored from neglect; vacant lots for 'just messing around' after school . . . ; belts of grasslands, shrubs, and forests surrounding and threading their way through cities and countrysides like a giant circulatory system." Greenways would be corridors to connect new and existing parks, forests and refuges.

This sounds like plans I've been reading about for nature reserves in Central and South America. The idea now is not only to establish refuges where jaguars and orchids can continue to exist, but whenever possible to keep uncut corridors between them so that populations can mix and young can disperse, with the result to be greater than the sum of the two parts. (One such plan in Costa Rica was described in the July 1986 *Phenomena*.) If we can do it for animals, why not for people?

The green will appear anywhere we allow it. All the concrete and asphalt we have laid down is just a thin sheet over the potential life of the Earth itself. Sometimes I sit on a bench in the middle of the city and think of the streets, sidewalks and parking lots as so much black plastic mulch laid down over a garden bed; the buildings are the big rocks there to hold it all down. But just as with real plastic, living green things will find the tiniest cracks in sidewalk or street and grow toward the sun. I look for the green on my noontime wanderings: the thicket of black locust and ailanthus (tree of heaven) springing up along a concrete wall, tufts of grass that have found a home in the seams of a black marble fountain. Any place where we decide to forgo blanketing, we will have a greenway.

The Commission has a plan to help any community that wants greenways. The Land and Water Conservation Fund, which draws its funds from the sale of oil and gas leases on the Continental Shelf (on the grounds that mineral wealth there belongs to everyone), has enabled states and localities to buy 2.8 million acres of recreation land and waters, and the federal government to add 2.9 million acres to its national parks, forests, wildernesses, recreation areas and refuges. The Fund expires in 1989; the Commission wants a new, dedicated trust fund to provide at least $1 billion a year for the same purposes.

Most of all, however, the Commission wants us to act. The report continually calls on Americans to light a "prairie fire" of community action. The best ideas may not even have been thought of yet. So, the Commission advises, "develop a dream. Define a vision. Look forward for twenty years, or fifty, and decide what you want the future . . . to be." A lot of people have a pretty good idea.

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Constitutional Convention, Philadelphia, 1787:

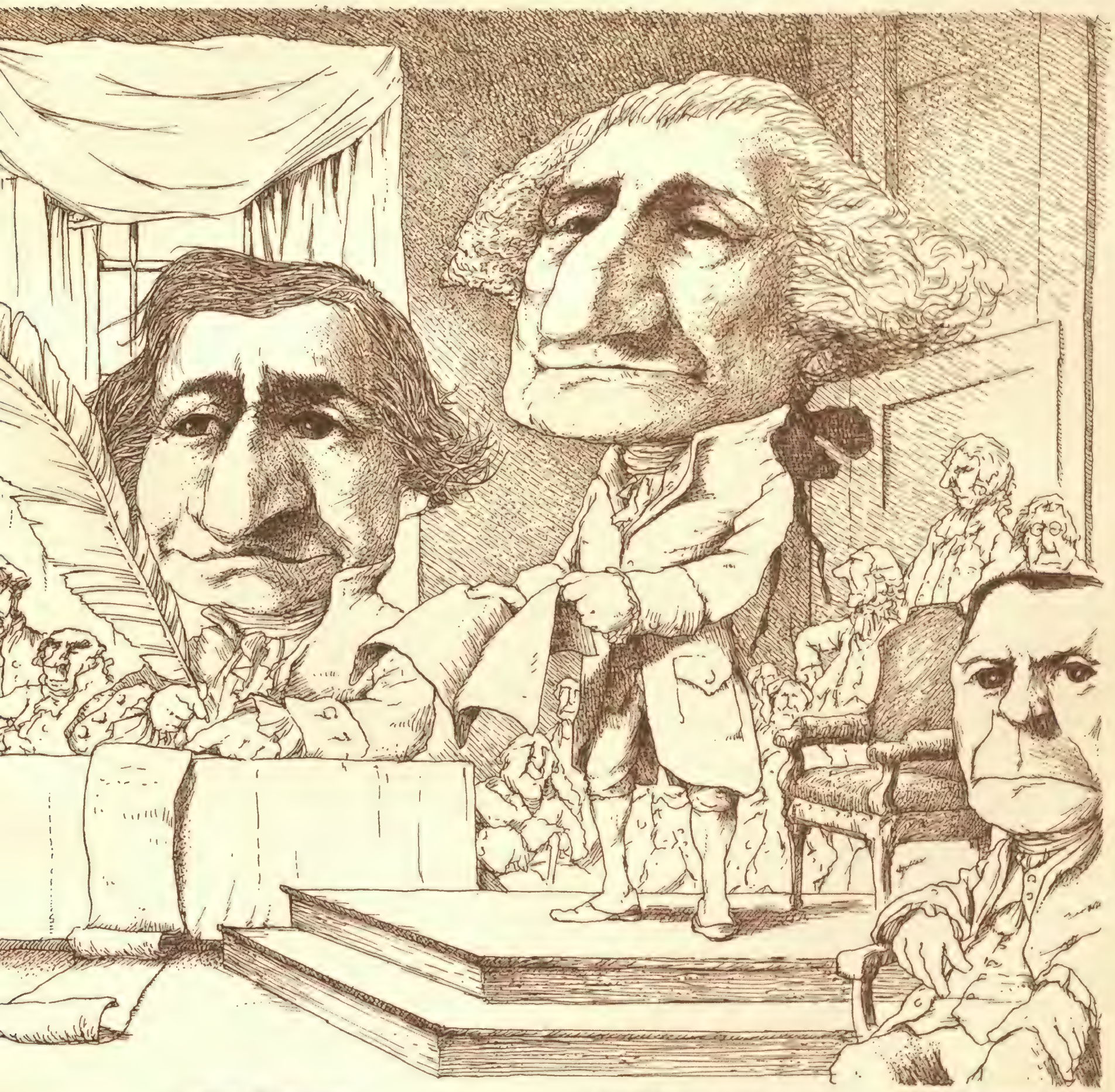
'Something must be done, or we shall disappoint not only America, but the whole world.' *Elbridge Gerry*

Benjamin Franklin *Gouverneur Morris* *George Mason* *James Madison*

By Ezra Bowen

On Wednesday, June 27, a muggy afternoon pressed down upon Philadelphia. It was the summer of 1787. Flies droned through the high-ceilinged room of the State House where more than 40 Convention delegates from the quarrelsome American confederation of states, the New England men sweltering in their woolen suits, braced for yet another round of contention. They got it, this time from Maryland's Luther Martin, who enhanced a reputation for tiresome bombast with a three-hour speech. His subject was the rights of the thirteen sovereign states with which this Convention, said he ad infinitum, had neither legal power nor fair reason to tamper.

Already restive from five weeks of debate, his listeners could hardly bear it: Oliver Ellsworth of Connecticut later chided Martin, saying that the speech "might have continued two months, but for those marks of fatigue and disgust . . . strongly expressed on which-



Edmund Randolph *George Washington* *Roger Sherman*

ever side of the house you turned your mortified eyes."

Two days later brilliant Alexander Hamilton, one of the men who at various times left the Convention to return or not, walked out. He might come back, he said, but only if persuaded it would not be a "mere waste of time." Hamilton's position was clear. His discourses, described by some as "logic on fire," presented the case for strong, central government—a near kin to the British monarchy, in fact—that the states felt most threatening.

And as it happened, Hamilton's vote didn't matter much to the Convention just then. He was one of three New York delegates and the other two hated the idea of federal government. Since Convention rules permitted each state only a single vote, they steadily overrode him. But soon it would be very much worth Hamilton's while to return. For during the first two weeks in July the proceedings dramatically neared complete collapse. And then, perhaps frightened by the possibility of total failure, the Convention finally hammered out a deal that not only held the delegates to the end but ultimately produced a daring blueprint for a federal constitution. It would, in time, substantially govern the most powerful nation on Earth.

From the viewpoint of high statesmanship, the pressure for compromise was strong. All the delegates knew they were laboring under the critical eye of history in the cause of as yet untried liberties. "What a triumph for our enemies. . . . to find that we are incapable of governing ourselves," George Washington wrote, "and that systems founded on the basis of equal liberty are merely ideal and fallacious." No delegate doubted that stronger government of some sort was needed to replace the toothless Articles of Confederation. After the Revolution, national authority had become almost a joke. The Congress had no real power to tax, regulate commerce, enforce foreign treaties; and criminals who crossed state lines were likely to go scot-free, since extradition was almost unheard of.

Worse still, the beggar government had gone virtually broke. Seven of the states, and the Congress as well, had been churning out paper money until, as pamphleteer Tom Paine once memorably put it, their paper was worth less than hobnails and wampum. Delegates to the Philadelphia Convention, some of whom had to ride or sail as much as 600 miles through spring mud or tides to get there, were obliged to change money into Pennsylvania shillings, the local coinage, as though entering a foreign country. Shipping states in the North wanted more laws to help them compete for world commerce against cut-rate British cargo rates. But most of the agricultural South was opposed to any protective ordinance that would drive up costs for its comfortable export trade in tobacco, indigo and rice.

James Madison: 'Let the national government be armed with positive and complete authority.'

Division and danger were everywhere. Beyond their economic squeeze the British were still a clear potential threat to American nationhood. The Union Jack still flew over the western posts where fur traders gathered pelts for London glove and hat makers. Former ally France desperately wanted to collect its wartime loans. Spain, another wartime friend, still controlled Florida, and was conniving for control of trade in the wild, fast-growing western reaches that stretched to the Mississippi, America's border under the terms of the 1783 Treaty of Paris. Spain had closed the Mississippi to American trade at New Orleans, and the river was the only shipping route from much of the western wilderness. Indeed, Georgia, which claimed land running from Savannah clear to the Mississippi, had just declared martial law in fear of Indians and Spaniards.

For more than a decade settlers had been flooding west over the moun-

tains. Since early February 1787 alone, more than 1,000 flatboats had headed west on the Ohio carrying 18,000 pioneers, with 12,000 horses, cattle and sheep. These rude frontiersmen did not see eye to eye with the rich planters of Virginia or with the Eastern seaboard traders of New York, Philadelphia and Boston. Not at all. Would these immigrants to the west form into new states or, God forbid, new countries under the protection of some foreign power? If as states, would their votes be equal to those of the original thirteen? Would, say, Virginia's laws and contracts under the Confederation hold up in a separate, sovereign Kentucky, or separate, sovereign anywhere else, such as "Transylvania," part of what is now Kentucky and Tennessee, to name just one other would-be western state then taking shape? And might these new states hold slaves or be free? "I dread the cold and sower temper of the back countries," said peg-legged, urbane lawyer and Pennsylvania delegate Gouverneur Morris, sounding very like any sober Briton contemplating the surly, separatist mood of colonial immigrants 15 years earlier.

Here was a set of time bombs that a young nation with huge, unorganized territories, whatever government it chose, must try to defuse as quickly as possible.

Gunning Bedford: 'The small [states] will find some foreign ally who will . . . do them justice.'

Some central control was crucial, but how much would be enough and yet not too much? Fear of an executive, or any central government for that matter, was strong in most delegates. They had fought for more than six years to throw off the distant, and not too onerous, rule of George III and his ministry. That helped explain both the toothlessness of the Articles of Confederation, and why they now defined each former colony represented at this Convention as a "sovereign and independent" state. James Madison, idealistic, politically relentless, the man who more than any other had brought the Convention into existence, spoke for all of them when he observed that "all men having power ought to be distrusted to a certain degree."

Almost as much, though, they feared the tyranny of the majority, any majority. And they knew that earlier attempts at creating anything like a democratic republic had failed. They had it from the much-admired Montesquieu, the world's leading authority on stable government, that democracies were unstable, that anything like a large republic was impossible to govern. Trying to regulate so vast and diverse a land as the United States (if there ever were to be a United States), as one Yankee wit put it, would be a bit like attempting "to rule Hell by prayer."

Besides, the small states wanted to know, what would happen to them when they were at the mercy of their large and populous neighbors? The same was true of the Southern states vis-à-vis the North. Beyond that lay the question of slavery, mentioned by name at the Convention as little as possible because the delegates knew from the beginning that confrontation over it might wreck any chance they had of agreeing on *any* effective central power. They were there, after all, not to abolish slavery but to shape, against great odds, a stable government that could maintain democratic order as freedom evolved. Though slavery's existence contradicted the terms of the Declaration of Independence they did not seriously discuss abolition. However hotly individual delegates might inveigh against it, slavery was still legally practiced in all but one of the sovereign states; the obnoxious slave trade itself had been outlawed, or sharply discouraged, by only seven. Every delegate under-

Illustrations by William Bramhall

James Wilson: 'No government could long subsist without the confidence of the people.'

stood that slaves were legally private property and, in the South, worth millions. Every delegate understood that under English common law, the protection of property had served as the foundation of all political rights.

Yet at first the Convention moved swiftly, far faster than anyone had expected. Even when disagreements and contentious vote taking occurred (over the course of nearly four months there would be more than 569 votes taken), the proceedings, early on at least, did not bog down.

Mostly this was due to the advance lobbying and planning of Madison, a Virginia planter by birth, but by trade perhaps the most farsighted and perceptive politician and political analyst alive. From 1780 to 1783 he served as a hardworking delegate in the Continental Congress, and from bitter experience while confronting petty state rivalry as he tried to get the states to pay for the war against Britain, Madison had come to the conclusion that the country might not survive at all without a drastic change in the "partition of power" between the states and the nation. To save the tottering Union he had studied past attempts at democracy; made himself an expert economist; helped enlist the reluctant Washington's support for this Convention; and nurtured an outline, condensed into 15 "resolves," officially known as the Virginia Plan, for totally overhauling the Articles of Confederation.

Madison was small, some said no more than five feet tall, with a voice that could scarcely carry across a crowded room. So a friend and fellow Virginian, Edmund Randolph, was chosen to speak for the resolves—to be, as Madison later put it, the "organ on the occasion." Six feet tall, handsome, a man "of distinguished talents, and in the habit of public speaking," Randolph was already, at 33, the Governor of Virginia, the most important state for any such Convention, being as it was both large and at the same time Southern and agricultural and so able to influence states least likely to favor strong central government. Hardly had the Convention opened than Randolph had the floor, and variously shocked and delighted the delegates with Madison's distilled ideas.

The rough structure of what Madison (and Randolph) urged is familiar to us today—indeed, at the time, six of the states had constitutions roughly similar in shape. A government divided into three parts: executive, legislative and judicial, variously elected and appointed. And as a rough form the Convention swiftly agreed to it. Easy passage was also given to the idea of a bicameral legislature, a fixture everywhere but Georgia and Pennsylvania. The Virginia Plan's provision for popular election of the lower house also was accepted, though it would come up again for bitter dispute. So, in fact, would virtually everything else. The real trouble, though, lay in the proposals for what sort of power each house would have, and on what numerical (and voting) basis representatives would be chosen.

"An individual independence of the States," Madison had written, "is utterly irreconcilable. . . . Let national Government be armed with positive and complete authority." He wanted to extend this "national supremacy" to the judiciary as well, and noted that in order "to give the new system its proper energy," all this executive power should be "ratified by the authority of the people."

The words "national" and "supreme" exploded through the hall when Randolph read them, imperil-

The author, Ezra Bowen, a Senior Writer at Time *magazine, is the son of historian Catherine Drinker Bowen.*

ing sacred creeds. During the war with Britain, New Jersey troops had refused to swear allegiance to the Confederation, declaring "New Jersey is our country." New York delegate John Lansing, dead set against a new constitution anyway, promptly scalded this "triple-headed monster, as deep and wicked a conspiracy as ever was invented in the darkest ages against the liberties of a free people." Rising to challenge Randolph, South Carolina's Charles Pinckney, a dandy and later a Congressman, demanded: I wish to know if you "mean to abolish the State Governments altogether."

With characteristic mildness and courtesy, Randolph explained that he had merely "meant to introduce" some general propositions. And indeed, to others, this nationalist concept seemed exactly what anarchic America needed. Among them, Pennsylvania's James Wilson declared: "We must bury all local interests and distinctions."

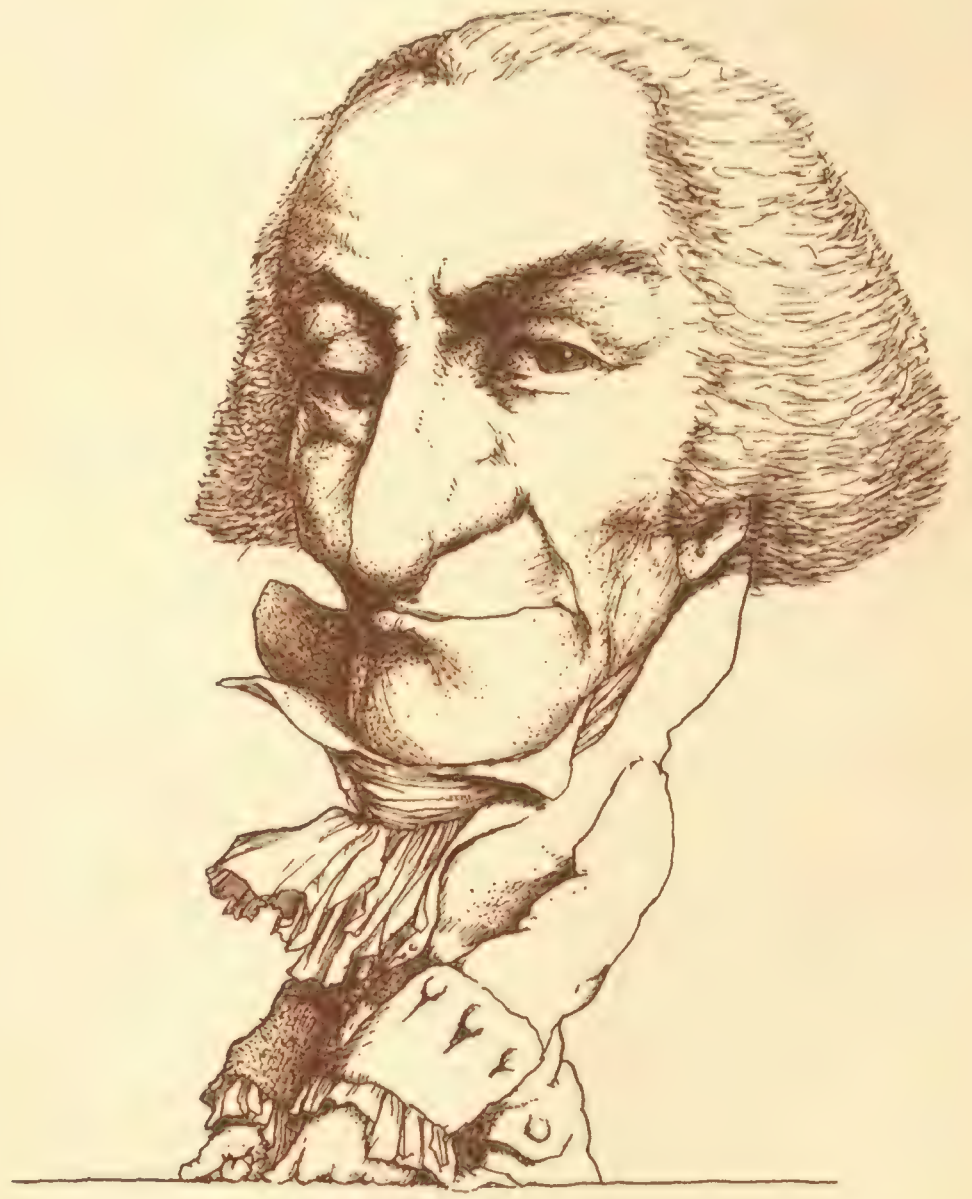
The Convention might have broken down right there, except for two procedural devices that the delegates wisely adopted. The first was that no vote on any matter would be binding until a final vote was taken on a full, finished text of the Constitution. That way, no delegate would feel he was being pressured, and collectively, with a chance to reflect and reexamine, they all might produce a better document to place before the judgment of their countrymen.

Through another bit of cautious wisdom, they decided to keep the debates secret. Thomas Jefferson, in France as American Minister, protested in a letter "so abominable a precedent," yet not a single delegate objected. Guards were posted every day at the door. And at one point Washington, who hardly spoke in his role as President of the Convention, rose with a piece of paper in his hand. It was, he said sternly, a copy of their proceedings someone had dropped on the State House floor. If the newspapers ever got hold of such documents, the General scolded, their revelations could "disturb the public repose by premature speculations. I know not whose Paper it is," he continued, "but there it is." He tossed the paper on a table with the comment "let him who owns it take it," then bowed and walked out.

"It is something remarkable," delegate William Pierce of Georgia recalled, "that no Person ever owned that Paper."

As a result of what was essentially a gentleman's agreement about tight security, no one but the delegates really knew what was said in the hall until 53 years later when Madison's widow released the meticulous notes he had copied out each night, a record of the debate that, translated into direct dialogue, has been used ever since in dramatic accounts of the Convention. Madison was convinced to the end that secrecy had given delegates freedom to speak with nearly complete candor, and even to change their minds, often several times, as they never would have done if each word had been shared with the press or with their volatile constituencies. "If the debates had been public," Madison later wrote, "no constitution would ever have been adopted."

Indeed the public might have erupted early over some of the arguments about the power and structure of the proposed executive branch. When Wilson put forward a motion for a single President, even Randolph boggled; he preferred an executive council. Of special concern, too, was the proposition that the President have veto power over laws written by the proposed National Legislature.



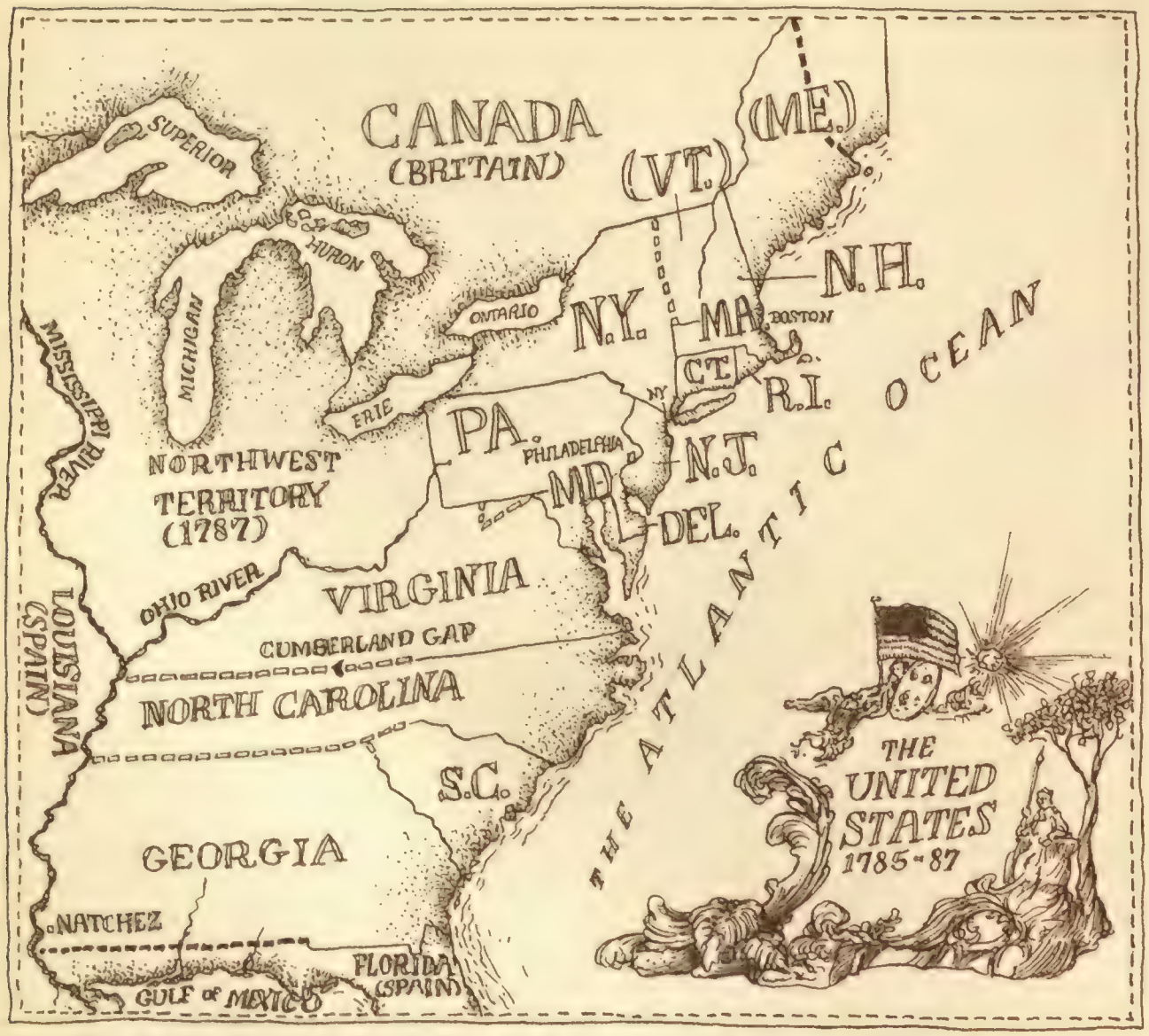
Elbridge Gerry: 'The evils we experience flow from the excess of democracy.'

"But why might not a Catiline or a Cromwell arise in this Country as well as in others?" South Carolina's Pierce Butler wanted to know. George Mason spoke darkly about "hereditary Monarchy."

Benjamin Franklin was worried too. Pennsylvania, after all, had an 11-man Executive Council. But everyone knew that if a national government were devised, George Washington would be elected the first President of the United States. They knew, too, that he had once been offered virtual dictatorship of the troubled country and steadfastly refused. With that in mind, though still distrustful of human nature, Franklin concluded, "The first man, put at the helm will be a good one," but then added, "Nobody knows what sort may come afterwards." It took 60 different votes before the Convention finally agreed to a single President with a legislative veto—albeit a veto that two-thirds of the Congress could, as it still can, override.

Many men who arrived in Philadelphia fearful of executive power, and seeing states' rights as the best bulwark against an overreaching central government with a tendency to fall under the control of powerful interests, were impressed by Madison's reassurances. In a startling speech that contradicted Montesquieu's political theories, Madison refuted the argument that huge size and a large, diverse population were a hazard to stable democratic government. Quite the reverse. The unified Virginia Plan, he said, would so "enlarge the sphere and thereby divide the community into so great a number of interests . . . that . . . a majority will not be likely at the same moment to have a common interest . . . and . . . in case they should have such an interest, they may not be apt to unite in the pursuit of it."

Numerous standards were put forward as qualifications for serving as a national senator or representative. Many remain in the Constitution today. One that does not is the possession of property. If a man held property, it was estimated, the more substantial a citizen his interest would make him; he was likely to have a thoughtful, sober stake in stable government. After all, the delegates in the State House were mostly lawyers, bankers, merchants or plantation owners. Twenty-one of them had fought in the Revolution, 24 had served in the Continental Congress and, together with the leading figures from smaller states, they felt they had created the nation.



The thirteen sovereign states trying to form a workable union in 1787 were threatened by Spain and England and deeply divided along regional and economic lines. Some of their borders (dotted lines) were still in dispute.

In June, debate began more and more to home in on the question over which the Convention soon almost foundered. Not only who would elect the representatives to the National Legislature, whatever their quality, but above all, how those representatives might be apportioned. According to the steadily evolving Virginia Plan, members of the first house (what we now call the House of Representatives) were to be chosen by the people for terms of three years.

For the other house (or Senate) representatives were to be chosen by the state legislatures for seven years. The aim was to create a lower house directly answerable to the people on a short-term basis, balanced by a less volatile, more elite body (a "House of Lords," opponents were to brand it) that did not need to worry about quick, popular complaint. Representation in both chambers would be portioned out roughly according to the number of people in each state, the slaves included, but with each slave to be counted as three-fifths of a person—a bizarre bit of arithmetic

that the Continental Congress had first settled on in 1783.

Many delegates were still a long way from swallowing such a radical direct-election principle. "[I am] opposed to the election by the people," said Roger Sherman of Connecticut bluntly. A lean, sharp-nosed man, "cunning as the devil" (even his friends put it that way), Sherman was born poor but had risen by shrewd industry as a farmer and lawyer. The people, he continued, "want information and are constantly liable to be misled." Delaware's John Dickinson scornfully defined the people as "those multitudes without property and without principle, with which our Country like all others, will in time abound."

Present-day politicians would not dare say such things, even if they believed them. But in 1787 these views were widespread. The debates were secret, and to many men interested in stable government they seemed the essence of common sense. It was a time, after all, when not a single government in the world received its power directly from the people; two years later, in the name of "the people," the uncontrolled power of the mob in France would eventually lead to a bloodbath, followed by an emperor. Elbridge Gerry, the man who would one day give his name to the word gerrymander, had been a firebrand during America's struggle against George III. Now, he told the delegates, he was convinced that "The evils we experience flow from the excess of democracy."

'Mr. Sherman proposed . . . that in the second branch or Senate, each State should have one vote and no more.'

Many delegates disagreed. Whatever they may have felt about the mob, it was clear to them that the power of any just government must derive from the people, however much they and all other contending political forces needed to be hedged around with checks and balances. Along with Madison, one apparently surprising proponent of power to the people turned out to be James Wilson of Philadelphia, a rich businessman and lawyer to the monied interests, including, during the Revolution, men accused of still being loyal to George III. George Mason of Virginia was another. Born to the privilege and responsibility of a 5,000-acre plantation, with more slaves than any delegate, he not only espoused abolition but now observed that since the "people will be represented; they ought therefore to choose the Representatives."

Gouverneur Morris, of course, disagreed. Other tempers were rising, along with the thermometer, as delegates fixed on points of conflict. Gunning Bedford of Delaware continued to denounce population-based representation as disastrous to the interest of small states. Virginia's population of 750,000 was almost 13 times that of Delaware; Pennsylvania, second largest of the original thirteen, had 430,000. How could the rights of a small state survive in such a government? "It seems as if Pennsylvania and Virginia . . . wished to provide a system in which they would have an enormous and monstrous influence," Bedford asserted. And later he thundered at the large-state delegates, "*I do not, gentlemen, trust you.*"

But the Delaware delegate really jolted the Convention when he said, the "small [states] will find some foreign ally of more honor and good faith, who will take them by the hand and do them justice."

This dangerous turn in the arguments, raising the specter of a separate American confederacy under the thumb of Britain, Spain or France, brought the proceedings to their most desperate impasse. Madison said that the small states could depart if so inclined; they would have to join later, anyway. Wilson, equally out of patience, derided states, large and small, as "imaginary creatures," divisive, obsolescent. George Read, of Bedford's own delegation, grandly declared, "The State Governments must be swept away."

Small wonder, in the face of such wrangling, that delegates were all but ready to give up. Hamilton's conscience later brought him back. Ma-

Alexander Hamilton: 'Is it possible to deliberate between anarchy and Convulsion on one side, and the chance of good . . . on the other?'

son, who stayed through to the end, declared that if he were doing this for money, a thousand pounds a day would not be enough pay. Even George Washington admitted, "I *almost* despair of seeing a favourable issue to the proceedings of the Convention, and do therefore repent having had any agency in the business."

Yet those days in early July, the worst times for the delegates, turned out to be the best times for the future United States of America. From them came a political compromise that saved the Convention and led to a Constitution that could be presented to the country with more than a fighting chance of ratification.

As the hot words flew, and proposals and counterproposals were voted on, one of the blows struck in the direction of possible compromise came from an unexpected quarter, Roger Sherman, who seemed to be changing his mind about the direct vote of the people.

According to Madison's notes, "Mr. Sherman proposed that the proportion of suffrage in the 1st branch should be according to the respective number of free inhabitants [a clear advantage for the large states]; and that in the second branch or Senate, each State should have one vote and no more." Thus could small states retain power beyond the size of their electorates. Like most useful ideas, the one Sherman presented was both simple and functional. But like all compromises it contained elements that each major faction—small states, large states, nationalists and states-righters—regarded either as imperfect or outright distasteful.

Also proposed by John Dickinson of Delaware and Oliver Ellsworth of Connecticut, the compromise was voted down. But the idea that "in *one* branch the *people*, ought to be represented; in the *other*, the *States*" did not disappear. Wilson and most other nationalists still wanted as little significant residue of state sovereignty as possible. Some delegates were outraged by the very idea that, say, tiny Rhode Island, which had boycotted the Convention and had been heavily engaged in smuggling before the Revolution, could vote with the august weight of Virginia or Massachusetts.

Like Wilson and Read, Madison was out of patience with state rivalries and petty fears of being dominated by neighbors. Such things seemed likely to destroy the dream of shaping the birth of a great republic. In his direct and prescient way he now let the delegates know where the real historic peril lay. "The great danger to our general government," said Madison, "is the great southern and northern interests of the continent being opposed to each other." The states, he also pointed out, are "divided into different interests not by their difference of size . . . but principally from their having or not having slaves."

It was true. Even with the help of a three-fifths count on slaves, if a National Congress based on proportional representation were put together right now, the North would have 31 votes to 25 for the South. Furthermore, during the same summer up in New York, the Confederation Congress was trying to put the finishing

touches on an ordinance for the newly won Northwest Territories (previously claimed by Virginia, among others, and extending to the headwaters of the Mississippi) by which slavery was forbidden, currently and in the future, when these territories might become states.

Pierce Butler of South Carolina now offered an astonishing proposal —to add to the South's voting power by counting slaves equally with whites in apportioning the number of national delegates each state had. Gouverneur Morris riposted that Pennsylvanians, anyway, would not stand for "being put on a footing with slaves." Crusty Elbridge Gerry had already observed that property should not be involved in rules for political representation. Otherwise why should not horses and cattle in the North, like slaves in the South, count toward voting totals.

As the floor debate sank to the level of bitter farce, Wilson turned the discussion skillfully, in a slightly different direction. He spoke of taxation, but, as had been proposed earlier, taxation used as a way of measuring voting powers. Taxes came from property. Slaves were property. America had been founded on the principle that there be no taxation without representation.

The argument moved the debate forward. Delegates began working on various ratios whereby representatives of the South in the legislature would not be at the immediate mercy of the North. They sought ways of expanding the number of representatives in the future so as to preserve political balance as the country grew —and populous western states came in. And it was, indeed, this vision of a threatening future, when the large and powerful Eastern states might find themselves in the minority, that made them see there was merit in having at least one house in which all states had the same number of representatives regardless of population.

And at last, with the main issue so clearly defined, but with the regional voting blocks now slightly divided among themselves, the Convention gained momentum once more under the rising banner of compromise. When the strongest nationalists, including Madison and Wilson, clung to their objections about the proposed arrangement for the Senate, delegates thought of something Ben Franklin, ever the conciliator, had raised earlier—an idea made to order for propertied men. Why not have the first house control all money bills?

For the populous states this appeared to be a nice trade-off—dollars, and the power of appropriating public funds, against a loss of political clout in the Senate—and it became part of a package that was moving toward a floor vote.

Madison still did not like it. The dispute "ended in the compromise," Madison later wrote Jefferson, "but very much to the dissatisfaction of several members from the large States." The deal left the national government far weaker than Hamilton would have wanted, too, but he took a non-utopian view. It was not hard, he would suggest, to choose "between anarchy and Convulsion on one side," and the chance of good on the other. South Carolina's John Rutledge eventually voiced the changing mood toward accommodation when, noting that the delegates could not do what they all thought best, he added, "we ought to do something."

And they did. On Monday, July 16, by the narrow vote of five states to four, with one state divided, the Convention passed the Connecticut delegation's much-amended measure, which would soon become known as the Great Compromise. A strong, cen-

Charles Pinckney: 'I wish to know if you mean to abolish the State Governments altogether.'

Patrick Henry: 'Who authorized them to speak the language of We the People, instead of, We the States?'

tral government had been agreed upon, but the small states were protected from the large in the Senate, while in the House, the South, with slaves counted as part of population, could not easily be overborne by the North. It was clear that no other arrangement would be acceptable to a majority. Even so, Madison was openly angry. He had always insisted the supremacy of the central government in the proposed federation must be unequivocal. Beyond that the idea of Delaware as Virginia's equal in the Senate seemed antirepublican to him. But what could he do? The very fact of the Compromise seemed to prove his perception that in an enormous country only the free play of diverse and contending interests could lead to an acceptably balanced decision.

As a final concession, Southerners agreed that, after 1808, the slave trade could be prohibited by Congress. Sherman had noted that the "abolition of slavery seemed to be going on in the United States, and that the good sense of the several States would probably by degrees compleat it." Some conscience-troubled northern Southerns, like Washington, who hated slavery but lived off its production, agreed. They hoped that in 20 years the practice might fade away, a hope made somewhat more reasonable to them because their kind of mixed farming depended less on slaves than did the deep South's. Southerners may have been somewhat reassured by a clause in the Northwest Ordinances mandating the return of fugitive slaves who entered free territory.

Two more exhausting months would pass before their work was finished, but after July 16 the delegates were clearly minded to get the job done. Members of the House, they agreed, would serve two years, not three. There would be two Senators per state, with six-year terms. And they would, indeed, be elected by the state legislators. It was not until 1913 that the 17th Amendment conveyed their election directly to the people.

Though the Convention established a national judiciary, it never gave the courts specific authority to review legislative acts, or to strike them down as unconstitutional. That famous precedent was set in 1803, with the celebrated Marbury v. Madison case, when arch-federalist John Marshall, Chief Justice during the presidency of anti-federalist Thomas Jefferson, broadly interpreted the new Constitution's breadth and power by declaring an act of Congress unconstitutional. So doing, he balanced for all time the three branches of government. He also opened the debate that rages today on how far judges may properly go in interpreting the original text and intent of the Constitution.

In 1787 some delegates believed they had done well to lay down broad principles rather than an interminable list of strict instructions. Others felt the document they were completing was far too vague and would fail to be ratified. "I'll be hanged if ever the people of Maryland agree to it," declared Luther Martin.

Martin had company. George Mason had become seriously alienated. Now at the eleventh hour he chose to ask why the document had no Bill of Rights. Mason was the spokesman on the point, though he surely had taken his sweet time about bringing it up. He would sooner chop off his right hand, Mason said, "than put it to the Constitution as it now stands." If some things were not changed or added, he wanted "to bring the whole subject before another general Convention." Eager to be finished, the other delegates disagreed and the Convention hurried on.

On September 17, 1787, the day the document was signed, Gouverneur Morris, a master of style to whom the final polishing of prose had been assigned, listened proudly as the finished work was read aloud to the 41 delegates who had stayed for the last act. It began with the ringing phrase, "We the People." With Franklin's special blessing, Morris had also fashioned a particular ending to the Constitution: "Done in Convention by the Unanimous Consent of the States present this Seventeenth Day of September."

It was a neat device, with a double purpose. Once signed, the Constitution would go to the Congress and

then to state ratifying conventions. To carry the country, it needed all the help it could get and preferably should emerge from the State House with unanimous approval. For, as one Philadelphian, not in the Convention but clearly in the know, had lately noted, "no sooner will the chicken be hatch'd, but every one will be for plucking a feather." Franklin hoped the insertion of the words "the States" would keep the bird whole. As state delegates, he purred, gentlemen could approve the Constitution with their signatures while as individuals they retained personal reservations.

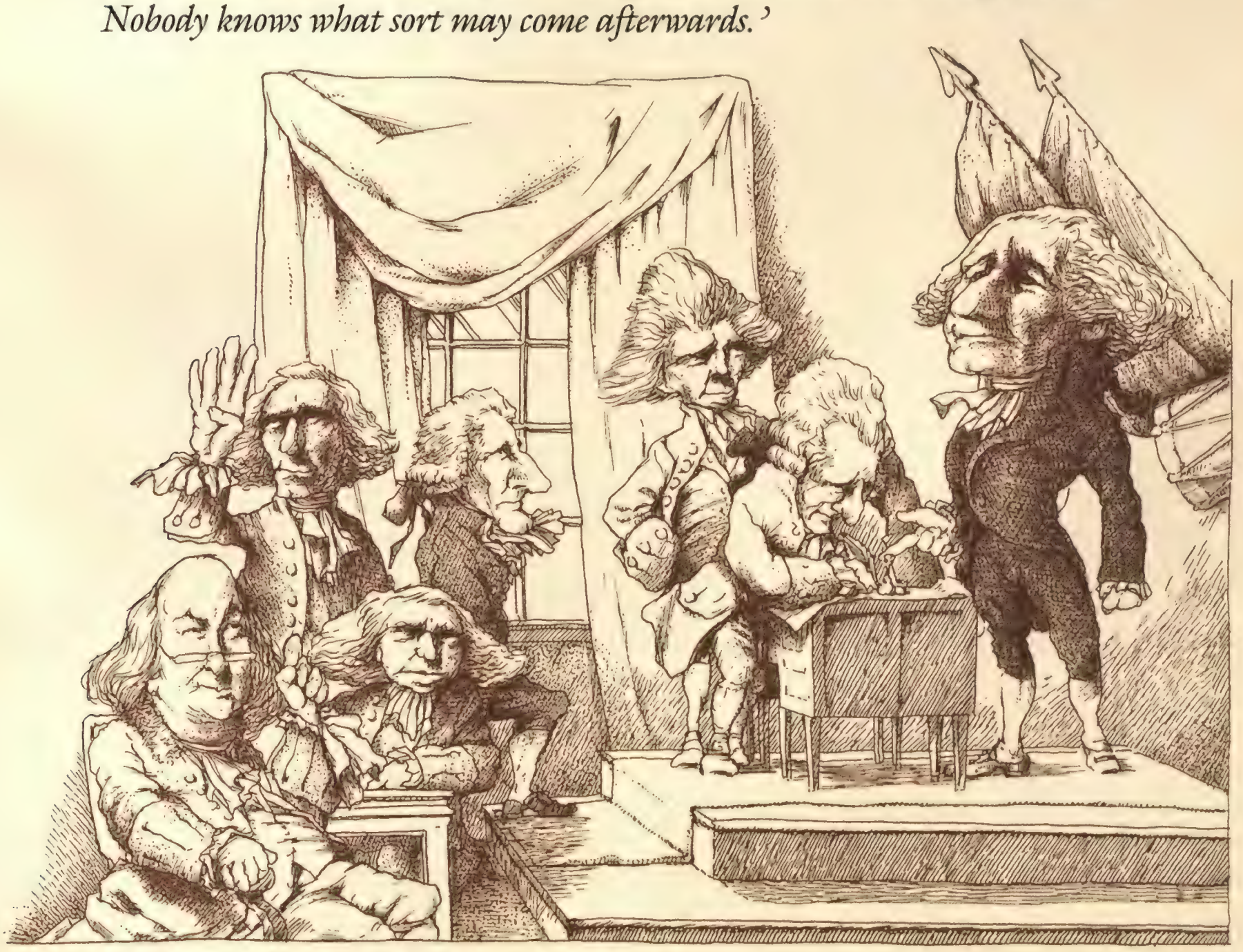
The artful measure nearly succeeded. Delegate after delegate stepped forward to sign. But some, most notably George Mason and Randolph, refused their signatures. They held firm though warned both of the "infinite mischief" the lack of their names might do at the ratifying conventions, where nine of the thirteen states would have to approve the document, and of the "anarchy and Convulsions" that might well ensue if the Constitution were rejected.

Predictably, it was in Virginia that one key ratification fight took place. In Richmond, Madison spearheaded one side, Mason and states' rightist Patrick ("give me liberty or give me death") Henry the other. "Who authorized them to speak the language of *We the People*," Henry roared, "instead of, *We the States*?"

If a bare majority of Congress could make laws, he argued, the "situation of our western citizens is dreadful. You have a bill of rights to defend you against state government [yet] you have none against Congress. . . . May they not pronounce all slaves free...?" The torrent of Henry's words, steadily rebutted by Madison, lasted 23 days. Sometimes he made five speeches a day, and his list of proposed rights and amendments that must be added to the Constitution grew to 40. But eventually, though he didn't vote aye, he ceased fire, partly yielding to the promise that a Bill of Rights would be added after ratification.

Within two years, the national Congress under the new Constitution proposed the first ten amendments that make up the present Bill of Rights. But the historic issue of whether a young nation, so dedicated and so constituted, could long endure, was anything but settled.

Benjamin Franklin: 'The first man put at the helm will be a good one. Nobody knows what sort may come afterwards.'



Mowing—N.C. Wyeth

Liberty Launch—Andrew Wyeth

And Then Into The Deep Gorge—James Wyeth

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such a stir in Russia in Washington.

By Henry Adams

First 'a marvel,' then out of fashion, a fine artist returns

After having fallen into virtual oblivion, the work of John La Farge is given a grand retrospective show, the first in 50 years

In 1859 the young novelist Henry James was strolling along the Cliff Walk at Newport when his brother William came running toward him. Bursting with enthusiasm, William blurted out: "There's a new fellow come to Hunt's class. He knows everything. He has read everything. He has seen everything—paints everything. He's a marvel!"

The newcomer was John La Farge, and to his contemporaries he was indeed a marvel. The historian Henry Adams, a good friend, once described him as "a very unusual man, who stands far away at the head of American art," and La Farge won similarly admiring accolades from figures as diverse as Winslow Homer and Edmond de Goncourt. By the end of the 19th century, La Farge's reputation seemed secure. Art critics lauded him as a great painter, as the father of American mural decoration, and as the inventor of opalescent stained glass. When he died in 1910 the headline in the *New York Tribune* declared, in boldface type, that he was "One of the Greatest Geniuses America Ever Produced—Revived Lost Arts."

Such tributes, however, faded with the passing of La Farge's generation, and for many decades his work passed into neglect. By the 1920s, rather than being praised, La Farge had begun to be castigated as the representative of a distasteful, effeminate, foreign strain in American art. One condescending writer dismissed him as "an artsy-craftsy cosmopolite, almost as rootless as an air plant," while another commented sarcastically that "La Farge is pure Newport. . . . He shows the failure of good breeding as a creative force in art." Then, about ten years ago, signs began to emerge of a reawakened interest in La Farge's work. Articles and doctoral dissertations on him started to appear, and La Farge's name began to crop up in exhibition catalogs and art surveys.

This month a major exhibition of his work opened at Smithsonian's National Museum of American Art. The first full-scale retrospective of his achievement in more than 50 years, it includes not only sketches, watercolors and oil paintings, but no fewer than ten striking examples of his stained glass. The show, which continues in Washington through October 12, will be at the Carnegie Museum of Art, Pittsburgh, November 7-January 3, 1988, and at the Museum of Fine Arts, Boston, February 24-April 24. It was organized jointly by the National Museum of American Art and the Carnegie Museum of Art, with support from a number of other sponsors. The time has come, it would seem, for a major reevaluation of La Farge's significance.

The artist did not conform to the stereotype of the American. "He was so 'un-American,' " mused Henry Adams, "that I have preferred to talk little about him, in despair of making him or his art intelligible to Americans." Something of a dandy, La Farge presented himself in an early self-portrait, now in New York's Metropolitan Museum of Art, wearing the elegant black attire favored by young Parisian artists of the *Quartier Latin* (opposite). Thus he underscored his mission of bringing the sophistication of European culture to the barren American landscape.

Even La Farge's appearance was exotic, for he had dark olive skin and heavily lidded eyes of an Oriental cast. His cultured, quizzical, reflective approach and his quiet, indirect speech (which was filled with qualifications and parentheses) contrasted strikingly with the smug, efficiency-minded, loudly expressed go-getterism that pervaded American society of the time. He seemed "an embodiment of the Gospel of Aesthetics," recalled Henry James. La Farge's manner, however, was far from stuffy, and he was fond of limericks, gently malicious gossip and fat cigars.

In a period when Teddy Roosevelt preached physical fitness and most men relished riding, fishing and blood sports, La Farge was completely unathletic. The young artist David Maitland Armstrong reported that La Farge's game of croquet was "absolutely the worst" he had ever seen. He suffered, or claimed to suffer, from poor health, and his well-timed maladies provided a good excuse for tardiness—although mysteriously they

La Farge's self-portrait at 24, in 1859, shows him in elegant black favored by Parisian artists of the time.

Metropolitan Museum of Art

Fogg Art Museum

The artist delighted in pretty objects and in transposing them into lovely pictures. This delicate watercolor, *Chinese Pi-tong*, is of a brush holder prized by La Farge and here filled with flowers. The vase was in his private collection.

never prevented him from doing things he really wanted to, such as traveling to Japan or other remote locales. His wife, after attending the theater, once remarked to one of their sons: "It was so nice to see Sir Henry Irving playing Disraeli, with his diplomatic illnesses. They did remind me so much of your father."

La Farge's intense commitment to his diverse artistic activities sometimes made him irascible and high-strung, and he himself once confessed in a note to Henry Adams, "My temper is frightful and the world is stuffed with sawdust." Yet when he relaxed he turned into the most genial and charming of companions. His son John, writing of one of his rare visits with his father, reported: "Father worked busily, as was his custom, during the day, dictating, painting, and generally ordering everybody around. But delightful were the long August evenings, when he would balance his cigar in the fingers of his left hand and gesticulate mildly with his right and tell of his experiences in the South Seas."

John La Farge's European traits directly reflected his unusual family background. Born in New York City in March 1835, he began his life as an outsider to what was then the central strain of American culture, for he was of Roman Catholic rather than Protestant heritage and of French rather than English descent. His father was a former Napoleonic soldier; his mother was related to Paul de Saint-Victor, a noted art critic and a friend of Baudelaire and the Goncourt brothers, Edmond and Jules, influential literary figures of the day. La Farge learned French before he learned English, and his ties with France were strengthened by a lengthy European grand tour that followed his graduation from college.

Shortly after his return to the United States, La Farge abandoned the study of law and moved to Newport, Rhode Island, to study painting with William Morris Hunt. Hunt was a brilliant, intense, excitable personality addicted to expletives, whose career would later end tragically in a nervous breakdown and apparent suicide. After being kicked out of Harvard for exploding an outhouse with gunpowder, Hunt had gone to study painting in Paris. There he had helped to create the reputation of French Barbizon School painter Jean-François Millet, whose canvases he first encountered rotting neglected on the earthen floor of the artist's studio. He had a fine personal collection of modern French works—including Millet's masterpiece, *The Sower*, which he had purchased for a mere $60. Through Hunt, La Farge was able to absorb the tech-

niques and fresh tenets of the new French painting.

Perhaps it is in La Farge's still-life paintings that one can best see the new look he brought into American art. These were freely brushed, highly personal responses to intimate subjects; and they were baffling to most American critics, who were accustomed to a more meticulous and literal manner of painting. In many ways La Farge's creations have more in common with the flower paintings of Fantin-Latour (SMITHSONIAN, July 1983) or the early work of the Impressionists than with the production of any earlier or contemporary American still-life painters. The testy critic Clarence Cook, accustomed to a more finicky approach, complained of one of La Farge's flower paintings that it possessed "neither truth of form nor structure" and merely summarized the "general aspect of a wreath of flowers at a distance of, say, thirty feet." Cook observed of La Farge that "his theory is . . . that color can do everything."

An important aspect of the creative freedom of La Farge's design was the influence of Japanese prints, which he appreciated and collected even before the French painters. La Farge's son Grant later recalled, "When I was a little boy arriving at the age when children are interested in picture books, the Japanese picture book was abundant in our house. I cannot remember a time when they were not as familiar to me as any other form of illustration; and I was very young indeed when my father and I used to look at them together, and he would call my attention to the accuracy of the Japanese drawings of birds, fish and flowers. Of course there were other things besides books—porcelains, lacquers, and all that sort of thing."

Perhaps the masterpiece of La Farge's early flower paintings is his *Flowers in a Persian Porcelain Water Bowl* (p. 59) in Washington's Corcoran Gallery, a study of roses on a window ledge against a landscape background. With breathtaking skill and sensitivity, La Farge rendered the evanescent colored shadows on the billowing white curtain and captured the subtle variation in clarity and focus between indoors and out.

La Farge's landscapes of this period were also highly unusual—Clarence Cook dismissed one of them as "a blind muddle of color on a bit of canvas, which might as well have been put into the frame with one side up as with the other." In contrast to the most popular American landscape painters of the time, such as Albert Bierstadt and Frederick Church, who created dramatic, highly realistic panoramas filled with sunsets, mountain peaks and even exploding volcanoes, La Farge chose modest and intimate motifs, imbuing his paintings with delicate and personal feelings.

His subjects include a tree emerging from the morning mist, a haystack on a hillside, an old farmhouse in a snowstorm—the latter a canvas that the painter Elihu Vedder praised for the "truth of the transmitted light through the snow-burdened air." Appropriately, many of his paintings depict Paradise Rocks, the favorite meditation spot of the 18th-century Irish divine and philosopher Bishop Berkeley, who redefined the relationship between reality and sensation. La Farge's most ambitious landscape of the 1860s, *Paradise Valley*, painted entirely out of doors, has been described by art historian Lloyd Goodrich as "one of the first Impressionist landscapes in this country" (p. 51).

La Farge's early easel paintings received little public favor, although they won him a *succès d'estime* among a small circle of cultivated dilettantes. Moreover, they did not sell. Perhaps partly as a consequence, in the 1870s, just as he was beginning to gain recognition for his easel paintings, La Farge abruptly shifted his attention to decorative work. His first decorative pictures, several renditions of fish and flowers for a dining room in Boston, were never set in place for La Farge fell ill and was unable to complete the series. But fortunately the panels were seen two years later by renowned architect H. H. Richardson when they were exhibited at the National Academy of Design. With his enthusiastic stammer, Richardson declared he

National Museum of American Art

La Farge, fascinated by the meaning of water lilies in Oriental thought, painted this one in 1883.

Henry Adams is Samuel Sosland Curator of American Art at the Nelson-Atkins Museum of Art in Kansas City. He has written widely on the work of La Farge.

Cleveland Museum of Art

Series of watercolors on Japanese folklore included scene of *rishi* (holy Hindu sage) calling up storm.

would like to give La Farge the first decorative work at his disposal.

It took almost ten years for Richardson to make good on his promise, but La Farge finally got his chance when Richardson won the commission for Trinity Church in Boston—a building whose squat, broad proportions strangely resembled Richardson's own. Sometime around June 1876, the architect finally called La Farge to his sickbed and asked him to prepare a comprehensive decorative scheme of murals and painted decorations, and a few months later the work was under way.

The painting was done quickly, with a small band of assistants under uncomfortable and dangerous conditions, for the church was unheated and the surrounding construction sometimes made it necessary to dodge falling beams and tiles. Despite the haste of execution, however, the result was remarkably successful, a colorful and intriguing mix of painted prophets and purely abstract decorations. When the church was consecrated in the spring of 1877, the importance of La Farge's accomplishment was immediately recognized. As one woman wrote to the *Art Amateur*, "The art-loving person who could not spend an hour, nay two, amid its rich and varied beauty, must be insensible to color." The first large-scale decorative scheme in America to be executed by a distinguished painter, it set a new direction in American art and initiated the movement now known as the American Renaissance.

La Farge followed this success with domestic as well as religious projects. Not long afterward he received the commission to decorate the interiors of the homes of Cornelius and William H. Vanderbilt, perhaps the most lavish residences ever constructed in America. For the purpose he put together a substantial group of artisans and artists (which included such major figures as sculptor Augustus Saint-Gaudens), an ensemble that combined painting, sculpture, woodcarving, plasterwork, inlaid work and stained glass.

It was through his involvement with decorative work—and by means of a humble toothpowder jar—that La Farge produced his most original achievement, the invention of opalescent stained glass. Stained glass was virtually a lost art when he turned his attention to the field; many practitioners in the United States, rather than pursuing the painstaking medieval methods, simply painted over clear window glass with house paint. By happenstance, La Farge's gaze fell on a toothpowder jar, which had been carelessly manufactured of milky glass that was streaky and opalescent. He realized that by using such a material, filled with rich variations of color, it would be possible to create pictorial effects.

In some of his earliest windows La Farge employed glass cut right out of bottles and jars to serve as a visual accent, but he soon began manufacturing glass himself. "John La Farge was an enthusiast," one of his glassmakers later recalled. "I can see him yet flinging off his coat in our office and admiring any new batch."

Broken wine bottles, globs of glass

La Farge's windows employ a jumble of contrasting textures, colors and materials unlike any that had been used in stained glass before. I had always supposed, for example, that the background of his West Window for Trinity Church in Boston was flat, but a few years ago, when the window was repaired and I was able to examine it at close hand from scaffolding, I discovered that it is composed of molded spherical globs of turquoise glass, about the size of golf balls, which are mixed together with chunks from broken wine bottles. In other windows La Farge employed glass that was streaky and varicolored, or textured with rollers, or cracked and fractured—or he combined glass with other materials such as amethysts and semiprecious stones. La Farge's new methods and new materials gave him such extraordinary control of color that he could duplicate the delicate texture of a peony blossom, the shimmer of light on a fish's scales (see cover), or the iridescent splendor of a peacock's tail.

By the 1880s La Farge had become a well-known figure in the New York social world. Theodore Dreiser, for example, mentioned him in *Sister Carrie* as part of the Greenwich Village set that congregated around Richard Watson Gilder, the genteel editor of *Century Magazine*. It became increasingly difficult for him, however, to keep up with the flood of new commissions.

La Farge's later productions—in sharp contrast to

most of the easel paintings of his Newport years—became pastiches of the work of the Old Masters: his mural in the Church of the Ascension in New York borrowed figural groupings from the work of Raphael and Palma Vecchio, as well as 19th-century French academician Thomas Couture.

The pressure of work also exacted its toll on his personal relationships. Fairly early in his marriage, La Farge's life became divided between a bohemian art-centered existence in New York and a proper Catholic household in Newport where his wife brought up their six children. As he grew more and more involved in ambitious decorative projects, he had less and less contact with his family. At the time when his last child was conceived, in fact, La Farge was preoccupied with a lawsuit against Louis Tiffany, who, he charged, had illegally acquired the stained-glass techniques for which he held the patent. The period was such a difficult one for La Farge that his wife kept news of her pregnancy from him for fear that it would send him into nervous collapse. "It was only after I had actually arrived that the fact was announced to him," La Farge's youngest son, John, reported many years later. "What were his emotions I never knew."

In 1886 La Farge chose to make an escape from the responsibilities that surrounded him, albeit a brief one, when Henry Adams, despondent over the recent suicide of his wife, Clover (SMITHSONIAN, April 1977), offered to take him to Japan. La Farge decamped abruptly, leaving his affairs in confusion. To a publisher who had commissioned him to illustrate Shelley's "To a Skylark" he sent the laconic telegram, "The purple evening melts around my flight."

In Omaha, on their way to San Francisco, he and Adams were stopped by an earnest reporter, notebook in hand, who asked their destination. "We're going to Nirvana," La Farge replied. Unfazed, the reporter snapped back, "But isn't it a bit late in the season?"

In Japan, La Farge and Adams had well-informed hosts, for several of their Boston friends had already settled there. Ernest Fenollosa, star scholar of the Harvard class of 1874, had moved to Tokyo in 1878, and Dr. William Sturgis Bigelow had abandoned his surgical practice to take up the study of Buddhism at the Hōmyōin Miidera Temple on Lake Biwa in 1882. These two figures, who had become pioneering collectors and connoisseurs of Japanese art, guided Adams and La Farge in their explorations of Japan, as did their young protégé, Okakura Kakuzo, who later dedicated to La Farge his collection of essays on East Asian thought, *The Book of Tea*.

Nirvana, as the reporter in Nebraska had forewarned, eluded the two travelers. Japan was sweltering, for it was an unseasonably hot summer, cholera raged, and the cities and rice fields reeked with human filth and sewage. Adams' caustic letters home were filled with complaints. He found the landscape "ridiculous," adding, "I detest temples." La Farge, however,

Private collection

One of first Impressionist landscapes done in United States, *Paradise Valley* (1866-68), is an oil painting of pasture near the artist's home in Middletown, Rhode Island, in an area known as Paradise. La Farge said that he wanted his rendering to be commonplace and, at the same time, beautiful.

National Museum of American Art

La Farge was 40 years old when he took up the fine and difficult art of stained glass in 1875. He quickly learned that there was little left of the medieval tradition in the art form and went on to invent a new technology of his own. In all, he created 300 windows of surpassing glory, among them *Peonies in the Wind with Kakemono Borders* (foldout above) and a blazing *Peacock and Peonies II*, on the back of the foldout.

tended to gloss over all discomforts, both in his paintings of the scene and in the book he subsequently wrote about his journey, *An Artist's Letters from Japan.* His paintings, most of which depict tourist highlights, have the pristine attractiveness of picture postcards, and his book discusses the mystery of the East, paying little heed to practical considerations.

La Farge's stay in Japan was rather brief—a mere three months—but it colored his work for the remainder of his career. Many of his most delightful works were in some way related to his Japanese sojourn, notably a witty group of watercolors illustrating episodes from Japanese folklore.

More exotic still was the South Seas, which La Farge visited with Adams in 1890 and 1891. In Hawaii they found that the native way of life had largely been destroyed by foreign incursions, but in Samoa the native society still stood intact, very much as it had existed for millennia. The very night of their arrival in Tutuila they were treated to a performance of the Siva, in which a half-dozen half-naked women danced and chanted in the flickering firelight. "La Farge's spectacles quivered with emotion," his companion Henry Adams commented. "No future experience, short of being eaten, will ever make us feel so new again."

Though they were unimpressed by the white men they met in the tropics (even by Robert Louis Stevenson, who struck them as shabby and unwashed), they were overwhelmed by the dignity of the native chiefs, who traced their genealogy back for centuries. After their first meeting with Mata-afa, the great Samoan warrior, Adams commented to his companion, "La Farge, at last we have met a gentleman."

When they finally tired of Samoa, Adams and La Farge moved on to Tahiti, arriving a few days before Gauguin. While there, they stayed with the Teva clan, which had ruled the island in the days of Captain Cook. Adams compiled material for a history of Tahiti, the first to be based on native sources, while La Farge produced sketches and watercolors, most of them portraying the spectacular mountainous landscape. They finally concluded their journey in Fiji. There they trekked with the governor into the rugged hill country where cannibalism had been abandoned only a decade or so before.

This sojourn in the South Seas spurred La Farge to an extraordinary burst of productivity; in the space of roughly a year he created several hundred watercolors. When he exhibited these in 1895 in New York, viewers were astonished by their hot tropical colors, which struck a new note in American art.

Up until the 1880s La Farge wrote relatively little—a few letters to the newspapers and an early essay on Japanese art. But surely it is not surprising that the intimate friend of Henry Adams and Henry James should himself feel compelled to begin writing as a profession. During his sojourn in Japan with Adams, La Farge took up the pen in emulation of his companion, and at the time of his death he had completed eight books and published several dozen essays. La Farge's last creation, in fact, was a literary one—a memoir of his friend the painter Winslow Homer, which he wrote on his own deathbed and which was not published until a few weeks after he died.

La Farge will doubtless always seem a maverick in the development of American art. His works embrace an extraordinary range of media, including watercolor, oil painting, mural decoration and stained glass. Moreover, they vary greatly in size and intent, ranging from small nature studies to grandiose religious and historical compositions. It's possible to view La Farge as a modernist innovator who collected Japanese prints and painted Impressionist works long before the first French Impressionist exhibition, or as a bizarre holdover from the past, the son of a Napoleonic soldier, who created altarpieces in the Renaissance style in the late 19th century.

La Farge's cultural background, his artistic attitudes and his intensely refined sensibility were in many respects at odds with the dominant tendencies of American life. Yet no other American artist of the 19th century so enriched American culture and none so inventively transformed an enormous range of media. The current retrospective of La Farge's work, the first since 1936, should provide an opportunity to rediscover the variety, the inventiveness and the beauty of his finest achievements.

Plotted on a geometric scheme, *Flowers in a Persian Porcelain Water Bowl* retains its lyrical beauty.

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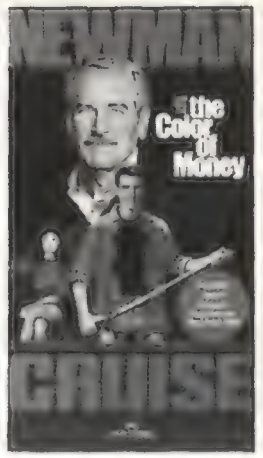

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BILL COSBY—HIMSELF	0935002	THE LONGEST DAY	0577032
OLD YELLER	5289012	ANNIE	1516052
EIGHT MILLION WAYS TO DIE	3589032	DIRTY HARRY	6017082
FLASHDANCE	2018142	ST. ELMO'S FIRE	1803072
ENEMY MINE	3584082	GIANT	6080002
JAGGED EDGE	1813052	SHANGHAI SURPRISE	4929002
A SOLDIER'S STORY	1733022	MARATHON MAN	4213052
UNDER THE CHERRY MOON	6223082	MOONRAKER	0677102
DR. STRANGELOVE	1521082	TRUE STORIES	6274062
YOUNG SHERLOCK HOLMES	4218002	STAR TREK II— THE WRATH OF KHAN	2013272
THE THING	5505092		
RED RIVER	7507032	THE MAGNIFICENT SEVEN	0534212
THE NATURAL	1649052	SHE'S GOTTA HAVE IT	7636072
BLUE HAWAII	0673142	CLOSE ENCOUNTERS OF THE THIRD KIND	1510192
THE GODS MUST BE CRAZY	7340042		
KING KONG (ORIGINAL)	5502022	DESERT BLOOM	1902072
TO CATCH A THIEF	2050052	MAD MAX	7109052
CHINATOWN	2025152	THE ROAD WARRIOR	6028052
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WITNESS FOR THE PROSECUTION	0717122		
MURPHY'S LAW	3397052	PLACES IN THE HEART	0978082
ROCKY IV	3570042	THE WAY WE WERE	1529002
HALF MOON STREET	1201052	DEATH WISH	2027132
TRADING PLACES	2017152	CITY LIGHTS	0669022
AT CLOSE RANGE	4881062	ALIEN	0002322
STAGECOACH	7113252	AGNES OF GOD	1812062

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		A PASSAGE TO INDIA	1741022
THE 400 BLOWS	7608012	ALL THE PRESIDENT'S MEN	6070022
THE BRIDGE ON THE RIVER KWAI	1606062	THE SEVEN SAMURAI	3108052
		NOTORIOUS	0567132
THE HUSTLER	0939062	THE CLAN OF THE CAVE BEAR	3583092
JANE FONDA'S LOW IMPACT AEROBICS	5139032	MR. MOM	7104002
THE WAR OF THE WORLDS	2094112	THE RIGHT STUFF	6043062
THE HOWLING	0527202	MAD MAX: BEYOND THUNDERDOME	6089012
CAMELOT	6027222		
CLUE	4219092	MISTER ROBERTS	6012372
A NIGHTMARE ON ELM STREET	3288072	THE QUIET EARTH	3608002
		THE CARE BEARS MOVIE	7110022
IT'S A WONDERFUL LIFE	3256052	STAR TREK III— THE SEARCH FOR SPOCK	2016162
ALL ABOUT EVE	0044082		
PRIZZI'S HONOR	4802022	POLICE ACADEMY 3: BACK IN TRAINING	6232072
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By Jim Doherty

The hobby that challenges you to think like a bee

Beekeeping will never rival golf or fishing as a national pastime, but for thousands of enthusiasts it's the sweetest sport there is

Opposite: Worker bee laps honey from uncapped cell. As hobbyist Glenn Musser (above) smokes hives at the National Arboretum in Washington, D.C., bees inside gorge on honey, making them less defensive.

When I was growing up I lived on the outskirts of a small Midwestern town next door to a keeper of bees. On many a summer afternoon, I watched our neighbor put on an old straw helmet with a flimsy veil and trudge out to a shady corner of the field where his hives were stacked. I often wondered what he did back there and one day I went along with him to find out.

On the way to the beeyard, my companion stuffed a wad of dry grass and baling twine into his smoker, a metal pitcher outfitted with a small bellows, and lit it with a match. Then, squeezing the bellows, he removed the covers from one of the "supers," as he called the top boxes of the hives, and puffed some smoke inside. After that, he pried out a wooden frame and let me take a look.

The comb of honey glistening in that frame resembled the stuff we used to get at the grocery store, except for one thing: it was covered with bees. There were

Photographs by Terry Domico/Earth Images

Learning to think like a honeybee

Swarming bees cluster with queen on a fruit tree while others search around for a suitable place to live.

Tom Parisian, commercial beekeeper in California, loads empty "supers" on truck for trip back to hives.

hundreds of the hairy little rascals. They were wiggling around and crawling over each other—and buzzing, of course. I was fascinated by that sound. It was a hollow, throbbing resonance that seemed to ebb and flow like the washing of waves on some distant shore. It was soothing; it was reassuring.

It was also misleading. All at once I experienced a burning sensation on my ankles and felt something zipping around inside a pant leg. I reacted the way any plucky country kid would react. I got the hell out of there and didn't stop running until I reached the safety of our house. The neighbor dropped by later. Evidently, he explained, I had been blocking the entrance to one of the hives. "Next time," he cautioned, "we'll have to be more careful."

Next time turned out to be several decades later when my wife and I inspected a beeyard not far from where we lived. We had been thinking about acquiring a colony or two, partly for the novelty of it, partly in hopes of perking up our underpollinated orchard. After learning from our host that just about anyone can get the hang of keeping bees, we decided to go for it.

For me, beekeeping turned out to be a wild ride

He works without protective clothing because "robber bees" looking for spilled honey are unlikely to sting.

Glenn Musser wears veil, suit while examining frames in case bees retaliate when their hives are disturbed.

from total ignorance to partial understanding, with some panicky detours in between. There were times when I had absolutely no idea what was going on inside my hives. I committed every blunder in the beekeeper's book and invented a few new ones to boot. Notwithstanding all of that, I gave it up only because we were getting ready to move. I intend to get back to it as soon as I can. Bees, you see, have cast a spell over me. I want to be a part of their world.

Evidently a lot of other people feel the same way. Beekeeping will never rival golf or fishing as one of America's favorite recreational pastimes, but there may be more than 200,000 hobbyists out there today compared with only a few thousand 30 years ago. These folks keep anywhere from one or two hives to several dozen (a large commercial operator may have 1,000 to 15,000) and they supply nearly half of the 200 million pounds of domestic honey being packed each year. Even in a top honey-producing state like Wisconsin, where around 10,000 beekeepers are active, hobbyists and sideliners far outnumber the people who earn a living at it.

Jim Doherty, a member of the Board of Editors, admires bees but has learned the feeling is not mutual.

In the old days, beekeeping was considered strictly a rural activity. Nowadays it's not unusual to find beekeepers firing up their smokers in suburban yards and city lots. Keith Meiser, a telephone-company technician, tends ten hives behind his home in Downers Grove, Illinois, about 25 miles west of Chicago. Marilyn Cassidy and her husband, Frank, a retired physicist, have been keeping bees in the New York City borough of Brooklyn for years. Eight of their hives are on federal park and refuge land near their home; one is in their 20-by-50-foot backyard. The Cassidys get as much as 1,500 pounds of honey a year. "We're good beekeepers," Marilyn says. "We know what to do." Glenn Musser knows what to do, too. A television technician for the U.S. Senate, he maintains 16 colonies under several giant oak trees on the edge of a meadow at the National Arboretum (p. 63). His bees pollinate many of the park's 50,000 kinds of trees, shrubs and other plantings. In return, Musser gets to sell some of his honey to the Arboretum gift shop, where it retails for $2.25 a pound.

Fanciful paper sculpture shows a simplified hive. Typically it would be home to 50,000 worker bees, 1,000 drones and the queen. Lower level is the brood box, where some 250,000 eggs are laid, larvae fed, nectar and pollen brought in. Only workers can reach upper-level "super"; queen cannot pass through horizontal excluder mesh to lay eggs. In the super, bees make and store more honey—but the beekeeper gets to keep it.

Different people take up beekeeping for different reasons. Some are turned on to it by a relative, a friend or, as in my case, a neighbor. Many folks get their start at a country fair, where their curiosity about animals and insects is whetted by apicultural exhibits and demonstrations. If there's one thing most beekeepers have in common, I suppose, it's a yearning to get actively involved with nature—not just as an observer or an exploiter but as a working partner.

It was no coincidence that the current beekeeping boom began about the same time the natural-foods fad and the environmental movement started picking up steam in the early 1970s. The country was worried about the effects of insecticides, herbicides and other agricultural chemicals. People wanted to "get back to the basics" and, to many, beekeeping seemed like a good way to do it. The beekeeper, after all, is an archetypal figure. Solitary, resourceful, encumbered with his mysterious paraphernalia, he harvests a pure, natural crop without defiling the earth or polluting the atmosphere. In the process, he gets about as close as possible to understanding some of the mysteries of life.

The honeybee inhabits a bright world of sunshine, fresh air and flowers. It takes its living from the flowers and, in the process, enables plants to reproduce. Thus it enriches the environment even as it is enriched by it. A bee colony's yearly cycle is a model of natural symmetry, starting out in the spring with depleted food supplies and a diminished population; building up its numbers and stores as summer progresses toward a

crescendo of blooming and nectar gathering; then reducing its size as the bloom dwindles in the fall, so that the remaining nucleus has a good chance of being able to subsist over winter on the honey and pollen stored in the nest. Bees symbolize the interconnectedness of things. "Watching them," William Longgood writes in his superb book about beekeeping, *The Queen Must Die*, "we briefly experience a sense of harmony and unity with our own forgotten beginnings."

"There's an element of gamesmanship"

Beekeepers, a motley and opinionated lot, don't talk much about the romance of the hive. You're more likely, at a meeting of a local club, to hear them argue about the best ways to produce more honey. "There's an element of gamesmanship involved," says Ronald Fischer, a beekeeper who lives in suburban Oak Park, Illinois, and works for an investment banking firm in Chicago. "You're always trying to beat your own record. If you average, say, 150 pounds of honey per hive one summer, then you won't be satisfied with anything less than 155 the next."

You may *get* less, though. A lot depends on the weather (bees stay in when it's rainy) but a lot also depends on the bees. The important thing to remember is this: bees are wild animals. They worked out their ingenious strategies for survival millions of years before we came along and they are not about to change them now. The challenge for the beekeeper is to figure out what those strategies are—to learn, in effect, how to think like a bee.

That is not an easy thing to do because the bee is a complicated social creature. It lives in a highly organized community that may at the peak of its population consist of 50,000 or more individuals, none of whom could survive alone and each of whom has a job to do. Drones, the males in the colony, exist solely for the purpose of mating with a queen. The queen's job is not to rule but to lay eggs. The eggs become larvae that metamorphose either into drones or into female worker bees, which progress up the vocational ladder from housework to fieldwork.

House bees cooperate in the construction of the colony's hexagonal-celled comb, in the care of the young, in the processing and storage of food. They clean, they nurture and assist the queen, they defend against intruders. They provide "air-conditioning" on hot days by fanning their wings in unison to increase circulation. When it gets cold, they cluster together to generate warmth.

Field bees forage outside the hive, visiting flowers to gather pollen and nectar. They take the nectar back to the hive and transfer it to worker bees, who convert it into honey by adding an enzyme from their salivary

The queen bee is encircled by workers who groom her with their antennae while she deposits eggs in cells.

Attended by a nurse bee (right), a drone emerges from brood cell. Drones exist to mate with queen in flight.

Forager announcing news of a good nectar source is mounted by one excited colleague, mobbed by others.

glands and then allowing the excess moisture to evaporate in the circulating air of the hive. The field bees take the pollen back to the hive, too, and deposit it in cells in the brood chamber. The young workers eat some of the pollen and secrete a substance known as royal jelly, which is fed to the larvae and the queen. Both honey and pollen are stored in capped cells so they will be available for consumption when they are needed.

To characterize bees as "busy" is to damn them with faint praise. A good queen can deposit more than 1,500 eggs a day into the colony's brood cells—perhaps as many as 250,000 a year. House bees may make 10,000 visits to a single larva during the course of its development. A field bee flies two or three miles from the hive and may visit 300 or 400 flowers on one trip. It takes many thousands of such trips, involving visits to five million flowers and 50,000 miles of flying, to gather enough nectar to make just a pound of honey—and a colony may produce 200 or 300 pounds in a season.

At the peak of what beekeepers refer to as the "honeyflow," when the landscape is in full bloom and bees have more work than they can handle, the typical field bee is exhausted by the time she reaches the age of 5 or 6 weeks. Her wings are torn and tattered. When she can barely wobble outside and assay one last flight, she buzzes off by herself to die or drops to the floor of the hive, where her body is discovered by workers and carried outside.

Even the queen is not exempt from the immutable law of the hive: produce or perish. If she begins to falter or behaves in a suspicious way, she is replaced. The lazy drones are tolerated in spring and summer only in case it becomes necessary to fertilize a new queen. At the end of the honey season, they are turned out of the nest—condemned, in effect, to die of starvation.

Lamentable though they may seem to us, such draconian measures are in the best long-term interests of the colony. If it is to survive from year to year, production must be maximized, consumption must be minimized. Bees *know* this; it is molded in their genes.

Sooner or later, whether it is nesting in a hollow tree or a hive in someone's yard, a healthy colony starts to run out of space. Its population is expanding rapidly; its comb is becoming increasingly congested with brood, pollen and honey. At some point, usually around late spring or early summer in the Midwest, thousands of worker bees and drones—half or more of the colony's total population—may fly away with the old queen to find a new home. This is the phenomenon known as "swarming" and it is the honeybee colony's natural method of propagation. The bees remaining in the original nest rear a new queen and life goes on there as before.

Because the loss of so many workers affects a colony's ability to make honey, prevention of swarming is considered the key to successful beekeeping. There is disagreement over the best approach—this is one of the things beekeepers argue about—but most practitioners do a couple of things. A colony that is inclined to swarm usually tips its hand by rearing a number of queens. It is a relatively simple matter for beekeepers to identify the large, peanut-shaped queen cells hanging vertically from the comb and destroy them. To relieve congestion, which can precipitate swarming, beekeepers take care to provide ample space in their hives for brood rearing and honey storage.

The savvy apiarist treats his bees the same way any good boss treats his employees. He provides excellent working conditions, plenty of incentives and an ample reward at the end of the year. He feeds his bees pollen, sugar water or honey when their stores are running low. He supplies water, shade, ventilation. He makes sure his queens are laying and if any are not he sees to it that they are replaced. He keeps an eye out for signs of disease and infestation. Capitalizing on the bees' instinct to hoard food, he regularly removes honey-filled frames and substitutes empty ones. In the fall he makes sure to leave enough honey in each hive to sustain his colonies through the cold months.

When the field bees are "out"

Once the nectar starts coming in, most beekeepers visit their hives every week or so. Midafternoon on a sunny day is the best time to go to the beeyard; that's when the field bees are "out." Some veterans can read a hive by just looking and listening. If it is humming contentedly, if the bees are coming and going in a steady stream and if there are no signs of overcrowding, all is well. When the keeper does look inside, he

Vigilant worker bees stand guard at hive entrance. They will sacrifice their lives in defense of the colony by stinging an intruder. But if a stray bee wanders by bearing a load of nectar, they will probably let it in.

moves slowly and deliberately, taking care not to bump or bang the hives and using his smoker to calm and distract the insects. At the first whiff of smoke, bees instinctively start gobbling up honey—an atavistic response that may go back to ancestral hoarding as a method of surviving forest fires.

Bees are not inclined to sting when they're busy and, in fact, it is amazing how forgiving they can be when a novice keeper starts bumbling around their hive. But there is a limit to their patience and even though the prudent apiarist wears a veil and gloves, angry bees can penetrate almost any defense. Bee stings can be fatal to people who are allergic to them. Most beekeepers build up an immunity that enables them to absorb stings without much itching and swelling afterward, but there is no way to become immune to the pain. A true beekeeper is stoical about that. He may even say that he can't wait to get out in the spring and take his first stings of the year. When he is working a hive, he stands there and accepts stings without flinching—without even seeming to notice that he is being stung.

I still have a way to go in that regard. Believe me, when you're hot and sweaty, when your shoulders and legs ache from lifting supers, the last thing you want or need is a solid strike on the back of your neck or under your arm. An attacking bee hits you almost as if it had been shot out of a gun. You can feel it get a grip on your skin before it plunges in its barbed stinger, and its poison sac gives you a stiff shot of venom. I don't care how you're *supposed* to react. I flinch, I slap and I am liable to jump around and holler quite a bit, too. This always seems to amuse my wife. "What were you doing out there?" she inquired when I returned to the house one afternoon. "Looking at the poor bees, or dancing with them?"

Bees have not always been treated with the kind of thoughtful consideration they usually receive today. When the earliest hunter-gatherers located a nest, they harvested the honey by bashing the comb to bits. The oldest record of Man's association with bees, cave paintings found in eastern Spain and southern Africa, date back to 7000 B.C. By that time, people were using smoke to pacify bees, and baskets on the ends of long poles to collect honey.

Helper Elizabeth Zwick uses special tool to scratch caps off honeycomb before putting frame in extractor.

Domestic beekeeping probably began with the realization that it was possible to remove that portion of a tree containing a nest and take it home. Further refinements followed, notably in the evolution of the skep, a man-made beehive of mud and straw. Subsequent improvements involved the use of lumber in various and sometimes fantastic configurations.

By 1300 B.C., beekeeping had become a commercial enterprise in Egypt and elsewhere in the Middle East. Honey was used in medication, for religious ceremonies and as an embalming agent. Penalties were levied for the theft of hives and, then as now, beekeepers grumbled about poor returns on the sale of their honey. The Egyptians pioneered in the development of migratory beekeeping, floating rafts loaded with hives down the Nile each spring to keep pace with the blossoming of crops along the banks.

Until the advent of refined beet sugar in the mid-1800s, honey was not merely a sweetener of choice; it was one of the few sweeteners available in most parts of the world. By the time the Romans invaded Britain, beekeeping was so widespread there that it was known as "an island of honey." Throughout northern Europe, the local beeyard became a significant adjunct to village life and monarchs appointed royal "beemasters" to ensure themselves an adequate honey supply.

Most Americans are surprised to learn that honeybees did not exist on this continent until they were introduced here by European explorers and colonists. The Indians were surprised, too; nonplussed, they referred to the stinging insects as the "white man's flies." Those early colonies swarmed, establishing new ones in the wild, and inexorably bees spread westward, arriving in Ohio on their own in the 1750s and in California by boat and covered wagon a century later. Honey hunting in the frontier lands became an art, then a business. In the upper Midwest, it was an unwritten law that the finder of a "bee tree" could establish ownership by merely carving his initials on it, even though it stood on another man's land.

An improved hive with "bee space"

As the country steadily became more densely settled, honey hunting was supplanted by beekeeping, which, in practical terms, was still mired in the Middle Ages. For centuries beekeepers had been stymied in their attempts to design a hive that enabled them to harvest honey without killing the bees, or, at the very least, making a dreadful mess of things. By the early 1800s, American apiarists had begun using boxlike hives with frames that were supposed to be removable. Trouble was, the bees didn't cooperate. They went right on stuffing their hives with comb and plastering every crack and exposed surface with a waterproof, gluelike resin called propolis. It was still necessary to cut the frames from the comb before they could be taken out.

The problem was solved in 1851 by an obscure Philadelphia beekeeper named Lorenzo Lorraine Langstroth. After studying for the ministry at Yale, he was compelled for health reasons to change careers. He established a school for young women in Philadelphia. Earlier, he had taken up beekeeping as a hobby; it soon became an obsession. A keen observer, Langstroth noticed something that everyone else had missed: his bees always left themselves a little working space between and around their comb. Taking that a logical step further, he reasoned that if a similar gap were left between, above and below the frames suspended in a hive, the bees would not build in it. Langstroth proved his theory in his own apiary, took out a patent on a hive that incorporated the "bee space" idea and wrote a book that explained how to use it.

The development, at long last, of the first removable-frame hive did more than simplify the harvesting

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Parisian and assistant load hives onto truck with boom. Farmers rent colonies to ensure pollination of crops.

of honey. It made possible the inspection and manipulation of a hive at any time without damage to the comb. That access is the basis of modern beekeeping. But Langstroth's contributions did not end there. He was also instrumental in the importation and promotion of the Italian honeybee renowned for its gentleness and industry. Most bees bred in this country today are hybrids of the remarkable Italian.

Langstroth wasn't the only pioneer. In 1857 a German carpenter named Johannes Mehring came up with the idea of pressing beeswax to make the comb foundation that goes into the frame. Maj. Francesco de Hruschka's centrifugal honey extractor, invented in 1865, made it possible to extract honey without destroying the reusable comb. And in 1875 Moses Quinby put the bellows on the smoker.

Langstroth and other 19th-century naturalists paid close attention to what bees did. It remained for the 20th-century Austrian zoologist Karl von Frisch to ask how and why. Von Frisch, described by one acquaintance as "a shy, gentle man with the serenity of a peasant farmer," began his elegant behavioral research at a time when the conventional scientific wisdom held that invertebrates were color-blind, rigidly mechanistic and incapable of subtle communication. He found that bees differentiate both color and smells in association with food. He discovered that they navigate to and from food sources by taking a fix on the position of the sun. He learned that they tell each other about the location, distance and quantity of flowers by executing certain "dances" inside the hive. His conclusion that bee behavior is attributable to inheritance, rather than intelligence, had a tremendous influence on the future direction of bee research. Today geneticists and entomologists at universities and federal laboratories are cross-breeding bees to develop more prolific queens and more industrious, efficient workers.

Much is at stake besides honey and beeswax. About a third of the food we eat depends on some form of insect pollination. Over the years, insecticides and farming practices have all but wiped out natural pollinators in many agricultural areas. Bees help take up the slack. Annually the four million or so colonies in the United States pollinate more than $20 billion worth of crops—everything from vegetables and alfalfa to fruits and nuts. Many beekeepers rent out their colonies, but most hobbyists' honeybees work for free, providing pollination as a by-product of their normal activities. Like the ancient Egyptians floating their hives down the Nile, some commercial apiarists transport their colonies hundreds of miles in order to take advantage of a certain kind of flowering crop—sweet clover, for example, or orange blossoms—that distinctively flavors the honey their bees produce.

Lately, bee researchers have been distracted by a new challenge from abroad. It is, of course, the so-called "killer bee" that was imported into Brazil from Africa in the mid-1950s and has been heading our way ever since. The Africanized bee looks like the Italian bee but is more defensive and more inclined to attack in force. It consumes much of the honey that it produces, leaving relatively little for anyone who attempts to work with it. It travels fast, competes with local bees and, worse, mates with them. It has ruined the honey industry in Venezuela and now the big question is: Will the same thing happen here?

A few scientists doubt it. They believe the invaders will have trouble coping with the northern climate. But researchers at the federal bee laboratories in Baton Rouge aren't taking any chances. Experts there, and elsewhere, are attempting to breed a new bee that can compete with the Africanized hybrid. They don't have much time. The unwanted guests are due to arrive in Texas in 1990.

The old insecticide bugaboo

Most beekeepers have more immediate concerns—everything from diseases, parasitic mites and honey-loving black bears to imported honey that undersells domestic labels. In some rural areas, the old insecticide bugaboo is still at the top of the problems list. "It usually isn't the spraying that causes bee losses," says Walter Gojmerac, an entomologist and beekeeping expert with the extension service at the University of Wisconsin in Madison. "It's what happens later. After a farmer uses an insecticide, bees may come along and pick up the contaminated pollen. They take the pollen back to the hive, where it is fed to the young, and then the young die off." Beekeepers tend to have strong feel-

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ings about their bees. "They get real mad," Gojmerac says, "when they lose colonies to insecticides."

But beekeeping is full of pleasant surprises, too. Several years ago, for example, hobbyist Ronald Fischer, the Illinois banking firm executive, responded to a curious advertisement in several national beekeeping publications. Richard Avedon, the fashion photographer, wanted someone to pose for him with bees. He flew Fischer out to California and photographed him with hundreds of bees crawling around on his bare chest. "They put a queen pheromone on my skin to attract the bees and keep them there," Fischer recalls, referring to the special scent queens produce to communicate their presence. "I got stung four times—twice right under the nose."

Fischer's picture has been seen in museums all over the country as part of the Avedon exhibit, "In the American West," and it appears in a book based on that show. The summer before posing for Avedon, Fischer won a top prize in a honey-judging contest at the Illinois State Fair. Three jars of his blue-ribbon chunk honey were auctioned off for $600.

That was an exceptional windfall, but quite a few hobbyists manage to make enough money selling honey to cover their expenses, and then some. The rest of us have to settle for purely psychic rewards, which can be considerable. One afternoon after I had collected some frames and finished the messy job of putting the cut-up comb into jars, I took several honey-coated utensils and newspapers out to my hives and hunkered down to watch the show for a while. The bees had stolen the nectar from the flowers and I had robbed the honey from them; now they proceeded greedily to reclaim what was left on the bowls and papers—licking them clean, as it were. Meanwhile, other bees were pouring in from the fields with little lumps of pollen gleaming like tiny nuggets of gold on their hind legs. The hives were humming. The air was thick with the aroma of smoke, honey and beeswax. For the next quarter of an hour or so, I neither knew nor cared what was going on in the rest of the world. I was plugged into the world of the bees and I couldn't help wondering whether any of them were as happy to be there as I was.

Fuzzy field bee collects pollen from tansy flower, stowing it in baskets on her rear legs. Pollen provides bees with protein. In process of gathering it, they cross-pollinate plants, which facilitates reproduction.

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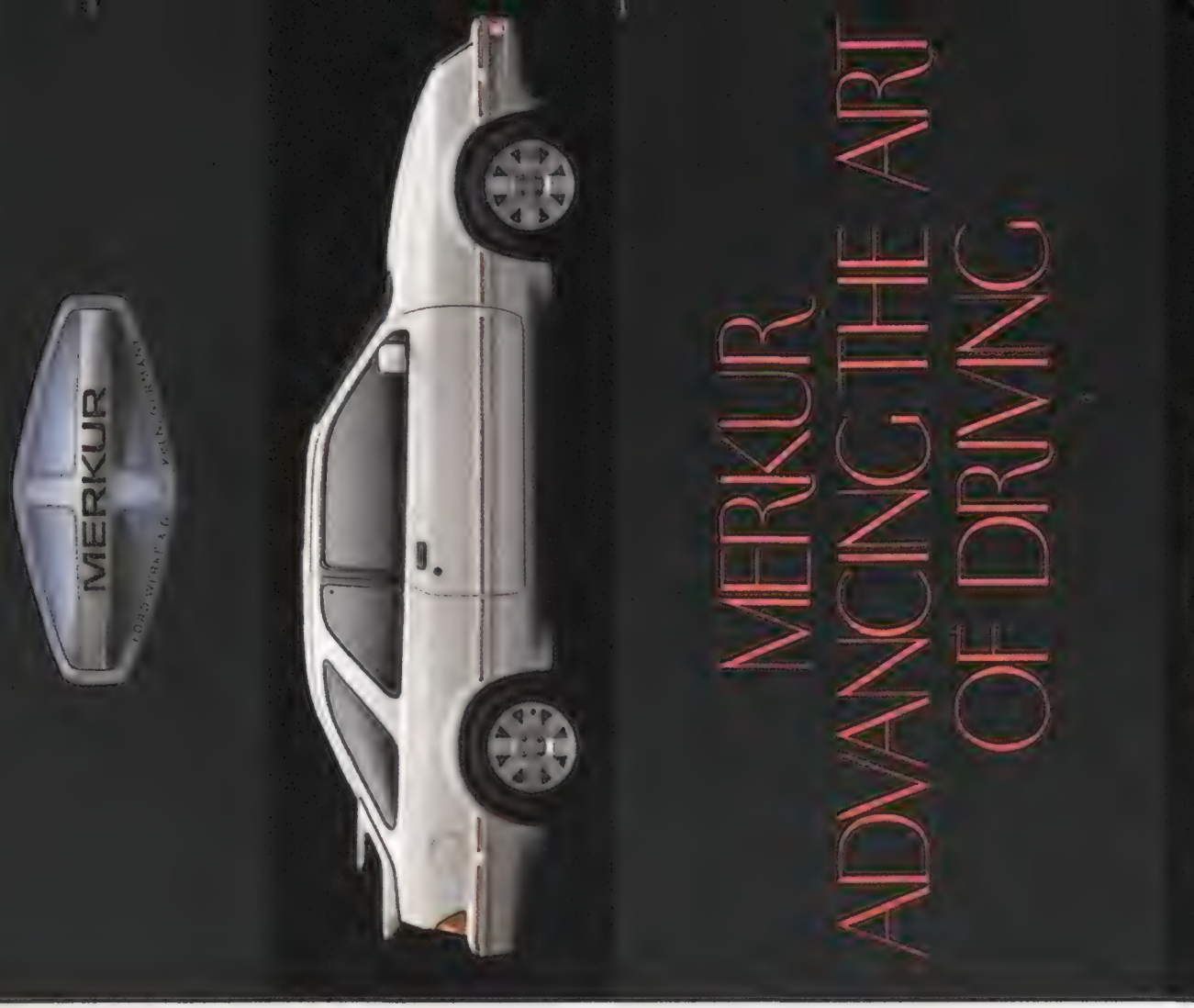

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By Daniel Cohen

How to succeed in publishing with nary a best-seller

One way is by specializing in out-of-print titles, long-dead authors and fun and games for all—just ask Dover's Hayward and Blanche Cirker

In a gritty warehouse district on Manhattan's Lower West Side, Hayward Cirker works in a scene of Dickensian dinginess. As founder and president of Dover Publications Inc., he catches inspiration for new titles by leafing through stacks of vintage *Harper's* and *Puck* magazines, dated scientific tracts and forgotten mystery thrillers. Musty but elegantly bound volumes are shelved to the ceiling in his lair. Nearby, a cadre of harassed-looking editors labor over manuscripts at scarred steel desks of gray and khaki.

Each week Cirker and his editorial board rescue out-of-print books from obscurity and grant them a lasting presence in bookstores, giving slighted authors a second chance they deserved years, sometimes centuries, earlier. In recent months Dover has published neglected works by such notables as the Victorian novelist Anthony Trollope, architect Eliel Saarinen, artist Raphael Soyer and explorer Robert E. Peary, as well as a bevy of younger talents. They join a stable of Dover-published writers, immortals like Leonardo da Vinci, Albert Einstein, Giuseppe Verdi, Charles Darwin, Käthe Kollwitz, Lewis Carroll, René Descartes, Frank Lloyd Wright and Johann Sebastian Bach.

Even with that lineup, Dover in its 46 years of publishing has never once landed a book on the best-seller lists. But by returning hundreds of arcane titles to print, it has won the loyalty of many of the nation's astronomers, keyboard musicans, graphic designers, historians, birders, crocheters, mystery fans, theoretical physicists and paper doll collectors. They figure

At Varick Street retail store, manager Robert J. Masto is barricaded by racks and shelves of backlist titles.

Photographs by Jonathan Atkin

Editor in chief Stanley Appelbaum sits with original plate from 1856 *Grammar of Ornament*, due out soon.

Creative director Paul E. Kennedy (left) and designer Frank J. Moore select swan decoys for new cover art.

Editorial board meets with A. G. Smith (cutout in hand) to discuss his Noah's Ark project. From left,

among dozens of specialty groups, scholars and hobbyists for whom Dover has become an essential provider of classic works in their fields. The vast majority of these books are surprisingly sturdy softcovers that cost $6 or less—many, less than a magazine.

Able to silence associates with a withering glare and sometimes more vocal admonishments, Cirker gives rein to an uncanny instinct for spotting esoterica that will sell. Dover adds more than 200 titles to its list each year—an astonishing array of literary oddities, obscure scientific texts, musical scores, arts-and-crafts pattern books and ephemera from cutout dinosaur dioramas to copyright-free graphics. It has released "new" titles from *Cookery and Dining in Imperial Rome* and *Gerard's Herbal* (first published in 1597) to *Folk Designs from India in Color* and scores of original works —just in time to ride a wave, or a ripple, of popularity.

Dover's antiquated editorial offices on Varick Street

Clarence Strowbridge, Florence Leniston, Cirker, James Spero, Smith, Paul Negri and Blanche Cirker.

evoke book publishing before the era of the multi-million-dollar blockbuster with a TV miniseries tie-in. "Cirker is like the typical 19th-century entrepreneur, who founded and ran the business and never pretended to be a generalist," says John Tebbel, author of *A History of Book Publishing in the United States.*

But having pioneered sales of paperbacks through bookstores instead of drugstores in 1951, Cirker disdains frenzied pursuit of a mass-market best-seller. "We're totally dedicated to the backlist," he boasts of the 3,000 titles Dover tries to keep in print indefinitely. Instead of smash hits, he nurtures "sales that are slow, medium and fast." He treasures thank-yous from authors Einstein, Alexander Calder, Lotte Lenya and Lewis Mumford, who wrote admiringly of Cirker's "keeping alive aging books—including my own!"

The publisher has endured with a formula that would spell disaster for a competitor. "The number of books sold is important to me, but not too important," says Cirker. "Einstein's [first edition of] *Relativity* sold 500 copies and changed the world. I'm content to sell 300 or 400 copies a year of a book I think deserves to stay in print." While jealously guarding precise sales figures, Dover admits to vending around six million volumes annually, 15 percent of them overseas. But Cirker's allergy to crunching numbers has meant that there have been years when exact sales figures remained perfunctorily untotaled.

The engineers' loss was Dover's gain

Despite the proclaimed aversion to accounting, Dover's first publication was nothing *but* numbers—Jahnke and Emde's *Tables of Functions with Formulas and Curves,* a German mathematical reference book it reissued in the midst of World War II when, to the dismay of engineering students, the supply was cut off. Cirker, a Depression-era graduate of New York's City College, had learned the business basics as a shipping clerk and then sales rep for Crown Books, in those days an aggressive low-budget publisher and distributor. In 1941, at the age of 23, he wanted to be his own boss, so he and his wife, Blanche, began selling scholarly remainders from their apartment—and named the company for the building in which they lived, not for England's white cliffs.

Whether or not uninterrupted American access to *Tables of Functions* changed the outcome of any battles, that first book did establish Dover's course. Instead of a then typical $20 scholarly reprint destined only for libraries, the Cirkers in 1943 produced a bargain $3.75 hardcover for individuals—and kept it in circulation with small press runs. After 44 years and 18 printings, it remains on Dover's backlist.

In 1951, they introduced trade paperbacks, standard-size volumes that broke seemingly ironclad publishing conventions. Until then, paperbacks, always pocket-size, had sold only from metal racks at drugstores and newsstands. Sexually suggestive cover art—even on a title like *Babbitt*—was as universal as the 25-cent cover price. But Dover priced *its* softcovers as high as $2, promoted them to bookstores and made them too large and too expensive for the ubiquitous racks.

"I just felt it was wrong to compress books into one fixed size," protests Cirker, who issued chaste editions of Max Planck's *Thermodynamics* and Miguel de Unamuno's *Tragic Sense of Life.* His competitors predicted quick failure, but the outsize paperbacks sold, albeit slowly. In 1953, Doubleday editor Jacob Epstein

Daniel Cohen wrote on the Automat in January 1986. His first Dover read was The Daguerreotype in America*; his latest is* Self-Working Mental Magic.

Cheek to cheek with Pope John Paul II, paper doll patriarch Tom Tierney enjoys his cutout celebrities.

opened booksellers' doors nationwide to paperbacks by launching the Anchor series, 75-cent literary classics for college students. By 1986, Americans were spending more than $1 billion yearly on trade paperbacks.

Most Dover full-color art books, complete symphony scores and reference tomes still yield change from a $10 bill. Virtually alone in publishing, Dover refuses returns from booksellers—flouting a canon of the business. And it scarcely ever pays author's royalties. Paradoxically, Dover protects its covers with plastic coating and binds books with traditionally stitched signatures, shunning the guaranteed-to-crack glue backing endemic even in hardcovers today.

That concern for durability has helped Dover win the sobriquet "the L. L. Bean of books" among its 300,000 devoted mail-order customers, who account for more than a quarter of the annual sales. Potent direct-mail marketing is the key. "The mailings give us cross-fertilization. We can reach the scientist who likes music, or the knitter who likes history," says Blanche Cirker, who is vice president. The marketing campaign is run from spartan headquarters in Mineola, Long Island. In a corner of a vast warehouse, four thundering presses spit out 4.5 million pieces of mail a year for bombarding precisely selected slices of a computerized mailing list every few weeks.

"Outside contractors print and bind the books, but we do run some covers here," says executive vice president Clarence C. Strowbridge, the second-in-command who has spent 27 years at Dover. "When I began, I was the only person in the editorial department besides Mrs. Cirker." Today he oversees the 130 employees who work in Mineola at distribution and sales, shipping and billing, advertising and promotion. There are 22 more at Varick Street in editing, design and production.

Beyond the presses, forklifts rumble through the warehouse, guided along an electronic strip in the floor. They hoist crates of books onto massive shelves three stories high, a cathedral of kraft paper and cardboard. "We have 15,000 accounts worldwide," says sales manager Florence Leniston. Dover has penetrated sites that few other booksellers can manage. Tourist kiosks near Guatemala's Maya ruins, for example, stock *Incidents of Travel in Yucatán*, an 1843 account.

Loyal Dover readers mirror the scope of the vendors, with none more ardent than fans of Anthony Trollope. The Victorian-era novelist of whom Henry James said, "His inestimable merit was a complete appreciation of the usual," fell from favor after his death in 1882. But his mild, detailed surveys of provincial English and Irish manners have lately attracted a troupe of admiring readers. "They're one of the glories of 19th-century fiction," says John Mosedale, a New York television-news writer who discovered Trollope in the early 1970s. Until Dover reissued *The Claverings*, a lesser-known work, in '77, he recalls, "I had been almost in a state of despair because I had all the hardback editions available. I look for a 'new' Trollope the way other people wait for their favorite author to finish a work." In February Dover rewarded such devotees with a 17th volume, *Harry Heathcote of Gangoil, A Tale of Australian Bush Life.*

Few things beat a university murder

Mystery fans rival the Trollopians in their breathless tracking of Dover's line, which includes a trove of early thrillers. "They published *An Oxford Tragedy* by J. C. Masterman, which sells well because, to a classic fan, few things are better than a university murder," explains Carol Brener, owner of Murder Ink, a New York City bookstore with 20,000 mystery titles in stock. "And they brought out works by J. Sheridan LeFanu, milestones in gothic supernatural suspense. I doubt these would be in the local library otherwise."

Dover's editors, if not leading bon vivants of the publishing world, husband formidable academic backgrounds for their literary sleuthing. "Finding those

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Backed by a blowup from the book, graphic designer Seymour Chwast holds *New Art Deco Alphabets.*

titles was an unofficial duty," says Everett F. Bleiler, 70, retired vice president for advertising, who for 22 years developed and edited Dover's line of Victorian popular fiction, supernatural literature and early detective novels. With a working knowledge of a dozen languages, Bleiler, Harvard-trained as an archaeologist, rescued not only the esteemed LeFanu but followed up with weird tales by E. T. A. Hoffmann and Algernon Blackwood, 19th-century thrillers by Mrs. J. H. Riddell and G. W. M. Reynolds (*Wagner, the Wehr-Wolf*), and vintage detective fiction like Jacques Futrelle's *The Thinking Machine.*

Under Hayward Cirker's ever-watchful eye, Dover parlayed popular trends into its own best-sellers. The firm republished Marguerite Ickis' *Standard Book of Quilt Making and Collecting* in 1960, well before the 19th-century craft became a 20th-century craze (SMITHSONIAN, May 1987). As the 1960s counterculture flowered, Cirker picked up the scent of mysticism and reissued popular editions of *The Egyptian Book of the Dead* and *I Ching.* More recently, dinosaur cutouts and coloring books have topped its list. But not even the prescient editors managed to predict that the 1884 science fiction classic *Flatland* or the whimsical *String Figures and How to Make Them* would each sell more than 100,000 copies over the years.

Like other publishers, Dover has occasionally bypassed writers who became vastly popular. "My terrible mistakes," Cirker modestly admits, "come from too-high standards. Marshall McLuhan offered me his first book, on advertising, and it seemed like gobbledygook. I exercised a degree of taste and rejected it. I also turned down Buckminster Fuller's *Nine Chains to the Moon.* He had made ten predictions in the 1930s—none of them was accurate."

Complaints from belligerent birders

But when Dover drops the ball, editors can count on readers to let them know. That's what happened when they quietly allowed some titles in Arthur Cleveland Bent's 26-volume *Life Histories of North American Birds,* originally issued as Smithsonian Institution *Bulletins,* to slip out of print 20 years ago; some were selling only 100 copies a year. "A very curious enterprise," ruminates reprints editor John Grafton, a 19-year veteran of the firm. "We immediately got a flood of mail from discomfited bird watchers. Anybody who thinks people don't write letters anymore should work at a publisher's." They brought back the missing books.

If any waterfowl aficionados stayed peeved, Dover probably won them back with the costliest offering in its history. Last winter the firm published *A Natural History of the Ducks,* a 1,920-page treatise in two hardbound volumes with a $100 price tag. "I'm overjoyed that it's available again," Roger Tory Peterson, renowned ornithologist and writer, has said. The original 1920s edition, long out of print, fetches $5,000 at rare-book auctions. "Our audience is made up of people who can't find a book any other way," explains John Grafton, his own office crammed to the I beams with antiquarian books.

For rural and small-town dwellers, Dover may well be the most accessible serious bookseller. "I discovered that Dover had voice texts when I was looking for their needlepoint pattern books," says Betty La Mora, a homemaker in the logging and fishing town of Waldport, Oregon. "You can easily get cabin fever here in the winter. And you don't find books like theirs at the newsstand." An amateur soprano, she fine-tunes her singing with the help of a technique book by Lotte Lehmann, celebrated lyric soprano of the 1920s.

With 200 music titles ranging from *My Ladye Nevells Booke of Virginal Music* (Elizabethan keyboard scores) to *Ragtime Rarities,* Dover relishes the search for oddities it can claim as its own—56 to 75 years after first publication, when copyrights expire. Ask a dancer where to find details of Renaissance high-stepping and

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Second-in-command Clarence C. Strowbridge has been up to his elbows in Dover Publications for 27 years.

the answer will probably be *Orchesography,* a 1589 dance manual written by an Italian canon. "It's perhaps the only source for the volta, in which you lift the woman on your knee, with a kick," explains Charles Perrier, a historical dancer in New York.

Once the editors have identified the work, they search for the right copy to reproduce. "Sometimes we have to wait to find a library that will lend us a rare edition," says editor in chief Stanley Appelbaum, a Yale graduate with a master's degree in Latin and Greek who joined the firm in 1960 as an advertising copywriter. It took him almost a decade to find and borrow an 1873 full-score version—not a piano reduction, he emphasizes—of Richard Wagner's *Das Rheingold,* which Dover released in 1985, completing its reprinting of the *Ring* cycle. Appelbaum, as he usually does in any of six languages, freshly translated Wagner's notes on characters, scenes and instrumentation.

As a popularizer of rarities, Dover topped itself last year by publishing the Pierpont Morgan Library's autograph scores—composer's handwritten originals—of Brahms' First Symphony and Mozart's Piano Concerto No. 21. The paperbacks provide the first public view of all pages of the manuscripts, including the one Brahms used at the premier performance of his symphony. "You get to see the composer's attack on the page, as it were," says Francis Mason, assistant director of what was originally the steel baron's personal library (SMITHSONIAN, September 1979). "We can exhibit the manuscripts, but you can't turn the pages."

Appelbaum, who has had a hand in thousands of books for Dover, has struck deals with dozens of museums and collectors. "We once reproduced a pre-first edition volume of Goya etchings, then valued at $100,000, from a Harvard library. We drove it to the printer and stayed while they did it. That kind of casual thing is dying out," he admits; "that's the gentlemanly aspect of publishing." He garners film stills from the old Astoria Studios in Queens, Piranesi drawings from the Morgan Library, rare advertising posters from the New-York Historical Society.

"But today more than half of our titles are originals," Blanche Cirker points out. And at least one prolific Dover author, paper doll artist Tom Tierney (p. 86), has won a cult following. He singlehandedly launched a revival in paper doll collecting in 1975 with a volume of cutout figures of 1930s movie stars. Dover asked for more and Tierney, a New York fashion illustrator, produced Marilyn Monroe and Rudolph Valentino dolls, with outfits from their best-known roles. "Joan Crawford, bless her heart, turned out to be my mentor," he says in an ineradicable Texas drawl. "She called and offered to get me appointments with all the Hollywood greats." His series—now 40 titles strong—includes full-color cutouts of celebrities from film, stage, opera, sports, fashion, politics and public life.

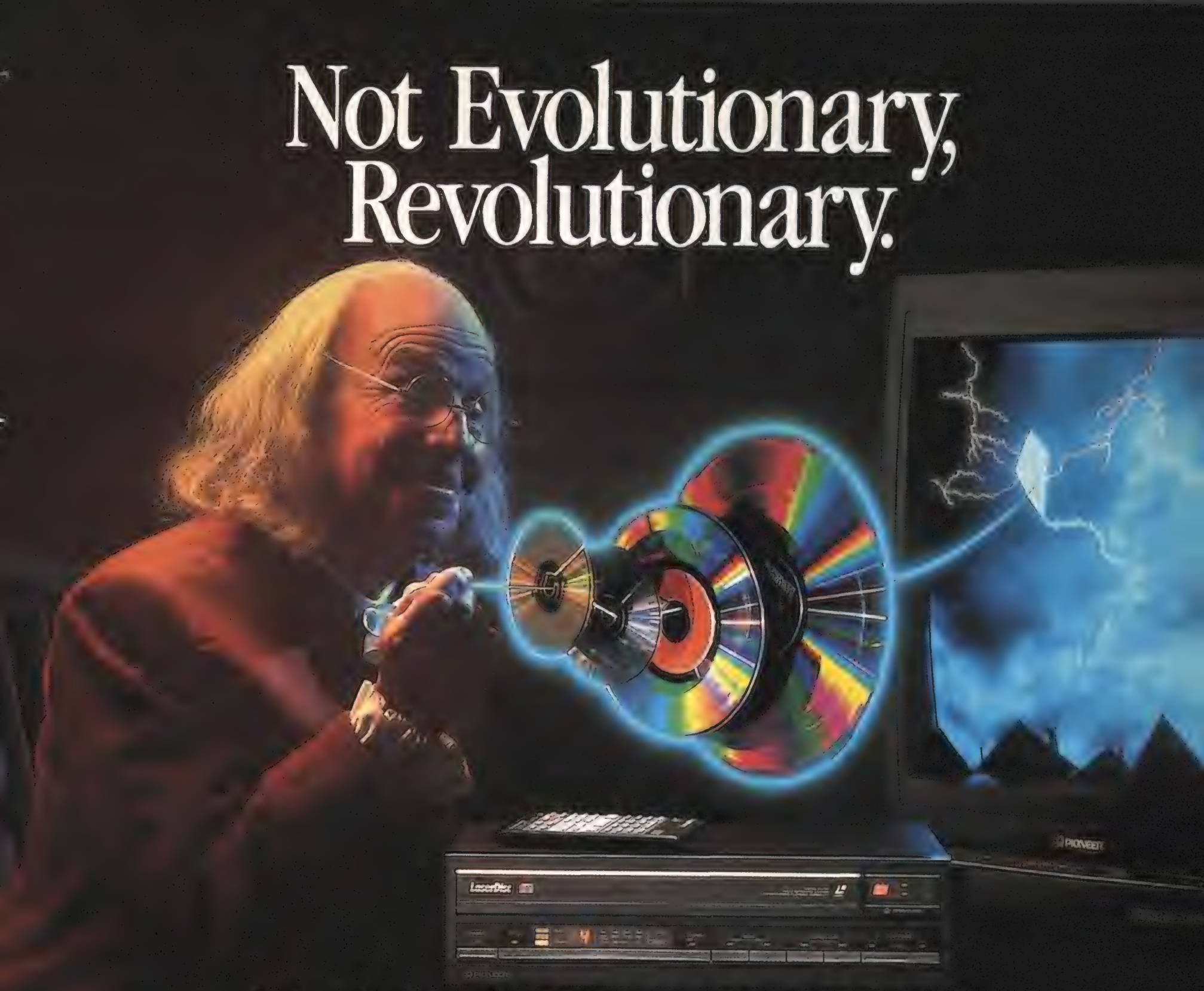
Tierney, like nearly all Dover authors alive or dead, has never received any royalties. "I did the books for a flat fee, but I don't resent it because they took a big risk that the things would sell at all," he says. "They're adamant about keeping prices down and quality up." Offering as little as $1,000 for rights to a book, Cirker understands that most authors don't expect to get rich from their works. "He drives a hard bargain," murmurs one graduate of contract negotiations. But there are compensations, as film historian Leonard Maltin found several years ago. "I had a civilized chat with Hayward Cirker, signed the contract and then he said, 'Let me go next door and have the check drawn,' " recalls Maltin, whose *Art of the Cinematographer* Dover first reprinted in 1979. "I have never been paid so promptly or so cheerfully in my life!"

Solicitous words from an ex-President

In at least one case, a reluctant translator feared *Dover's* financial loss, not his own. "I don't want to see a nice young man like you lose money," soothed Herbert Hoover when Cirker, in 1950, asked the former President for permission to reissue *De Re Metallica,* the 1556 mineralogy classic that Hoover had once translated. The elder statesman need not have worried. The work, with 289 Renaissance woodcuts, has sold 40,000 copies. It's still in print.

Albert Einstein proved even more reluctant in 1955 when Cirker asked if he could reprint *The Principle of Relativity,* which had sold miserably in its English translation. "He argued it was obsolete," says Cirker.

Not Evolutionary, Revolutionary.



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The pioneer of quality paperbacks, Hayward Cirker inspects a sheet of covers in the Mineola pressroom.

But he reminded Einstein that in the foreword the scientist had recently penned to Dover's reprint of Sir Isaac Newton's *Opticks*, Einstein himself made the point that readers value original sources. Einstein relented and, when *Relativity* became a Dover favorite, recanted, "My earlier decision was, of course, not justified." Cirker's hunches have won over most scientists whose work he seeks, including 17 Nobel Prize winners.

Cirker himself stresses the genuine need for reprints of early commercial works: "There are 19th-century trade catalogs which are scarcer than the Gutenberg Bible. There are catalogs for which no known copy exists." Reissues such as the *1851 Crystal Palace Exhibition Catalog* or the *Montgomery Ward Catalogue of 1895* preserve an unmatched view of daily life in the past. "It's amazing what those books do," says June F. Clark, an antiques dealer in Greenville, New York, who specializes in working-class Victoriana. "They allow you to look at accessories from the stable to the kitchen, to describe the fabric, the details."

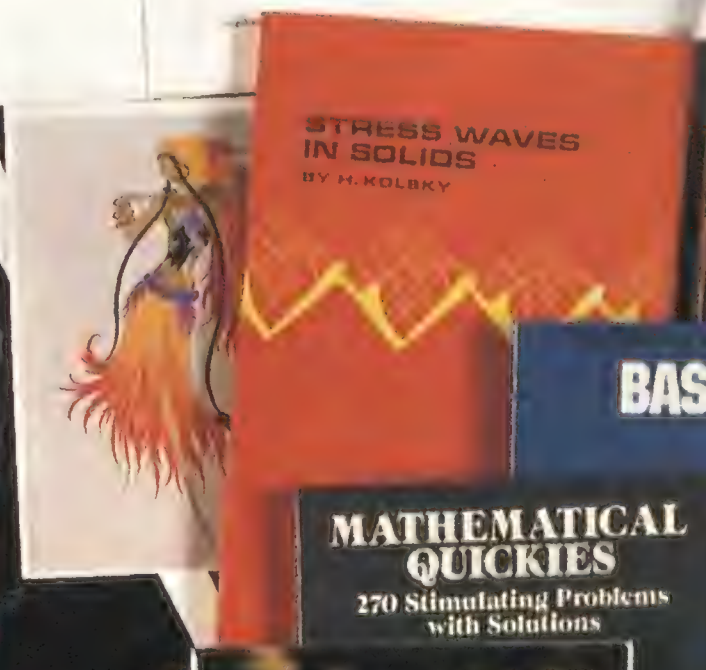
Dover's compact retail shop at Varick Street overlooks nothing, stocking all 3,000 titles from the backlist and some that are out of print. No street sign promotes the store, but, says manager Robert J. Masto, "when the artists arrive, it can get pretty crazy here." The frenzy builds fastest in the pictorial-archive aisle. Its 300-volume series encompasses a staggering array of graphics: *New Art Deco Alphabets, Antique Musical Instruments and Their Players, Ready-to-Use Illustrations of Hands, Chinese Lattice Designs.* The company credibly claims it to be the world's largest collection of copyright-free art.

Dover inaugurated the series in 1946 with its first nonscientific book, *Handbook of Designs and Devices*, a collection of geometric shapes which is still in print. As the firm's most durable product, the pictorial archive may prove to have had its most lasting impact on the publishing industry itself. "Those books," says graphic designer Seymour Chwast, "have made available all sorts of material for explaining our national history, for inspiration and for real stuff to copy." (Perennial favorites: holiday, bridal and teddy bear graphics.) But others value the archive too. Actor Richard Kiley used *Canaletto's Views of Venice* as a guide for period postures onstage. To help mount his opera *The Photographer*, avant-garde composer Philip Glass relied on Dover's definitive editions of Eadweard Muybridge, who pioneered motion picture photography.

Uncountable derivations of Dover-translated art permeate the land. In Kansas City, Joe Arthur paints signs for 70 parks and boulevards. "A lot of the illustrations come right out of the copyright-free books," he says. "I'm especially proud of the one in the elephant house at the zoo." Illustrator Donald Hendricks, of Riverside, California, marvels that "after 20 years, my favorite and most indispensable Dover still clings valiantly together." He used the *Handbook of Plant and Floral Ornament from Early Herbals* as a reference for period drawings in a "dead-serious cookbook," *Cooking with Flowers.*

Stained-glass artist Sheryl L. Hahn, in Cornish Flat, New Hampshire, has summed it all up: "They've inspired several of my windows—a woman-in-the-moon came from the *Handbook of Early Advertising Art*, and one of lotus blossoms is from *Chinese Designs*. I'm always looking for motifs." As proof positive of the enduring value of Hayward and Blanche Cirker's long-ago idea she adds, "If I see 'Dover' on the spine, that's the book I pull out first. They say you can't judge a book by its cover, but I'm not so sure about that."

From anatomical art to advanced math, Dover keeps readers' range of interests handsomely (soft)covered.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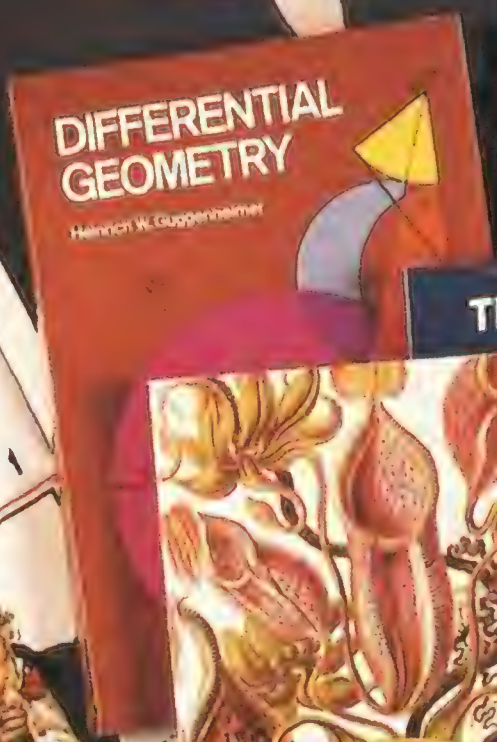
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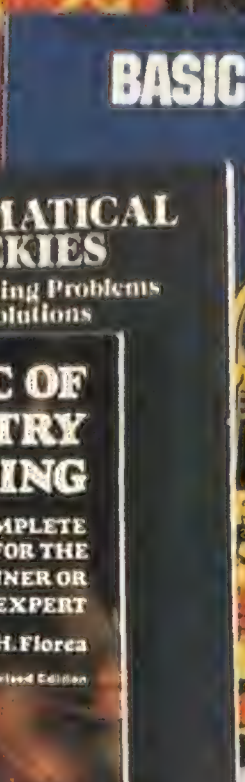
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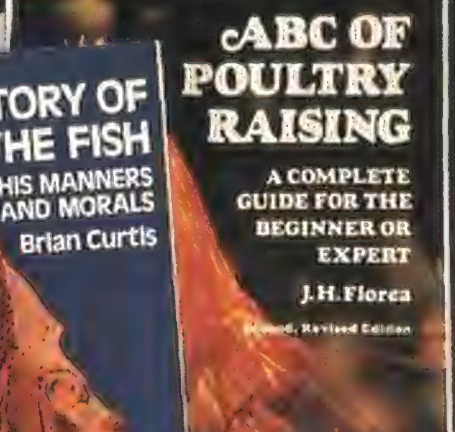
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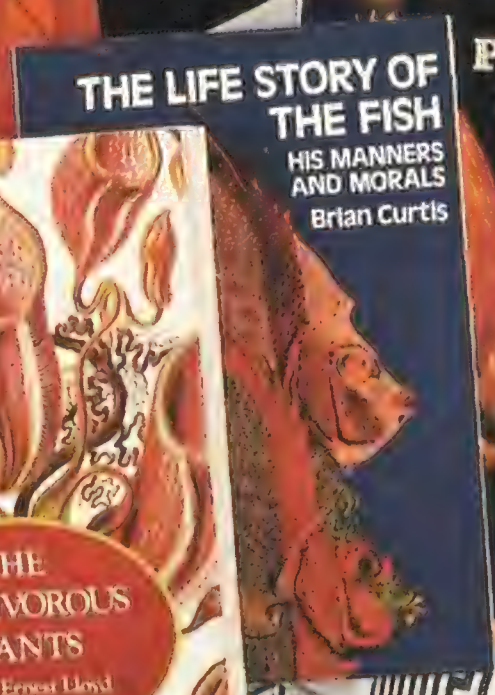
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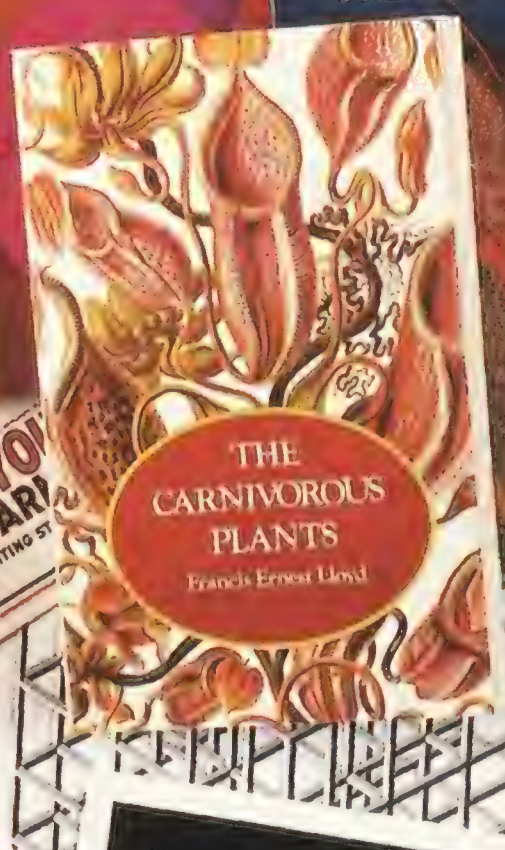
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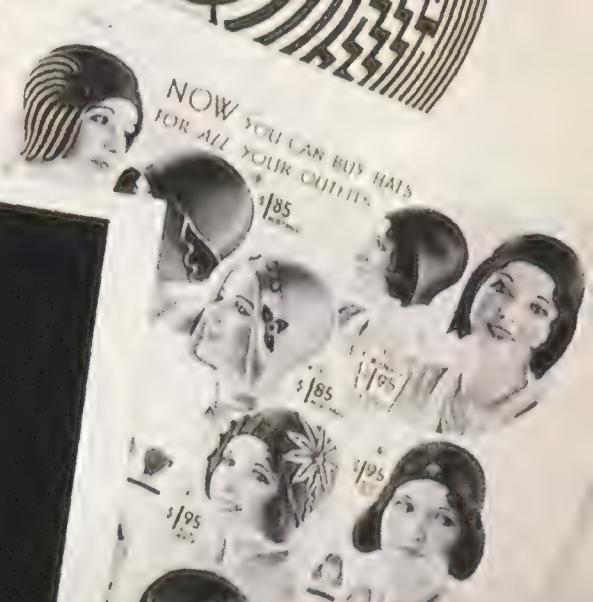
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By Dora Jane Hamblin

'Delicious! Ah! What else is like the gondola?'

Generations of Venetians and tourists have agreed with the poet, yet this romantic vessel might be facing the end of the line

Nevis Tramontin (right) and son Roberto pause, with tools, beside gondola-in-progress resting on *cantiere*.

Securely bound to one another in history and in the hearts of their admirers are the City of Venice and the gondola. You can't imagine the one without the other, and hand in hand they have seduced their visitors for centuries. Yet each is, like one-half of some successful human couples, a most peculiar type.

The humorist Robert Benchley entered Venetian folklore early in the century with a resonant cable to New York: "Streets full of water. Please advise." And a not notably romantic American mogul, editor-publisher Henry R. Luce, once remarked that "Venice is a city which must be seen to be disbelieved." He didn't say anything special about the gondola but it, too, is to be disbelieved.

It is one of the few watercraft carefully built to be asymmetrical, the left side noticeably wider than the right. It has no keel. It is propelled by one man with a 14-foot oar, and although it weighs half a ton (with gondolier) it can take on six passengers, lots of cushions, a vase of fake flowers and the gondolier's lunch. It is 36 feet long, about 5 feet wide in the middle and can make 90-degree turns with ease. Despite its apparent fragility, it won't sink.

Just when this quietly majestic miracle was born nobody knows, but some form of it must have emerged shortly after the mid-5th century when land dwellers at the head of the Adriatic Sea in northeastern Italy fled from Visigoths, Ostrogoths and Huns—wave after wave of hooligans from the north—to small islands across the then limpid waters of a lagoon. There the refugees industriously hammered piles into the mud, making houses the invaders would find difficult to reach. Still, they had to get from here to there among the 118 islands that now constitute Venice, so they must have made light watercraft. It had, after all, been done for millennia—in Mesopotamia, along the Nile and the Indus. In southern Iraq, the Marsh Arabs now use light boats to navigate the shallow waters where the Tigris meets the Euphrates.

Fact and legend are almost inextricable in such ancient tales, but one story is that as early as 809 one Estrella Partecipazio, daughter of the Doge (Venetian dialect for *duca* or duke, the ruling lord), went off by gondola to meet Charlemagne's son, King Pippin. Her mission was to dazzle him with her beauty and dissuade him from invading the islands. Her mission failed, but the Venetians won the ensuing short war. They continued to win, most of the time, for the next thousand years. The first reliable reference in the meticulous archives of Venice comes in 1094 when Doge Vitale Falier assigned to the "esteemed inhabitants" of the small community of Loreo the task of building him a *gondulam.*

As misty as the date of origin is the etymology of the name. Some say it comes either from the Greek or

Gondolier, on his way to pick up a client, silently plies his craft through the enveloping Venetian mists.

Photographs by Luca Vignelli

Latin word for shell, and there is some evidence that the craft was first called a *cymbula*. The late British etymologist Eric Partridge, in his *Origins*, voted for *gondolare*, Venetian for undulate, and perhaps a corruption of *dondolare*, to rock or to swing.

Whatever they were called, the gondolas of the 11th to 13th centuries appear in paintings as shorter and stubbier, not half so graceful as the craft of today. Gondoliers, in both paintings and documents, appear to have been black slaves or indentured servants, two to four for each gondola, and dressed in scruffy clothes. They were crucial to the life of Venice, however, as at that time there was only one bridge over the two-mile-long Grand Canal, which divides the city. There must have been dozens of boatyards in the early days, turning out all manner of craft. But in the 12th century Venice founded a shipbuilding center that displaced a number of these yards and was to become one of the wonders of the Old World—the *arsenale*. The legend of Henry Ford to the contrary, it was the Venetian arsenal that invented the assembly line. An awestruck Spanish visitor in 1438 described how its workmen could build a galley in a single day, then tow it past a row of sheds where well-organized and well-equipped workers put aboard cordage, then arms, then cannons, then food. By the time the galley reached the end of the line, its crew was lined up ready to go aboard and take it to sea.

Forget the bill, send your Crusaders

It was the Fourth Crusade at the dawn of the 13th century that made the fortune of Venice. Organized by Pope Innocent III and the barons of France, its primary destination was Egypt. But they had ordered their war galleys from the Venetian arsenal, and when it turned out that they couldn't pay for them, the Doge altered their plans. He was the extraordinary Enrico Dandolo, in his 80s and half-blind, but canny and ambitious. He said, in effect, never mind about the bill, but send your Crusaders to sack Zara, a city on the Dalmatian coast, and then go get Constantinople, the richest, the most powerful city of its world. In 1202 the arsenal duly delivered 480 vessels to transport fighters, horses and provisions. The Crusaders took Zara, took Constantinople, sacked and slew and plundered. The horrified Pope excommunicated everybody involved, but Doge Dandolo got what he wanted. Home came his ships with the famous four bronze horses that graced the facade of San Marco for centuries (SMITHSONIAN, September 1982). Home came a fortune in other loot, and the Doge, having turned down nomination as Emperor of Constantinople, decided he could accept the title "Lord of a Quarter and Half a Quarter of the Roman Empire." Plus, of course, several Greek islands, Crete and the shipping lanes of the world from the

The wealth of 18th-century Venice is captured in Canaletto's joyous painting of the Doge's state barge,

returning to St. Mark's Basin from annual Ascension Day ceremony of the Wedding of the Sea. Lavishness of the gondolas with their richly caparisoned *felze* prompted a Senate decree banning such ostentation.

Beautifully carved griffins are to be set above equipment cache.

Prow must be carved to exactly match the outline of the *ferro*.

Boat brought in for maintenance has an intricate stern ornament.

Decorative castings like this Triton grace sides of gondolas.

Rough-cut oarlock blocks stand behind a finished walnut *forcola*.

Adriatic to the Aegean, the Dardanelles, the Sea of Marmara, Egypt's Alexandria and the Persian Gulf.

The merchants of Venice leapt into action. Out went shiploads of wood, wool, linen, Venetian glass, wine. Back came cotton and silk, precious stones, sugar, spices, and incense from the Orient. Venetians of all classes became richer than they had ever dreamed.

Up went the great palaces, the Ca' (Venetian for *casa* or house) d'Oro, 1421-40; the Ca' Foscari in the mid-1400s; the Ca' Rezzonico about 1660. In between and all around grew palaces no less grand, but today less well known. They shouldered each other along the Grand Canal and spilled into lesser waterways. Each had its private landing stage, its gondola parking poles, its cadre of uniformed gondoliers. The rich had five or six gondolas to take the head of the family to his office, the lady to her diversions, the staff to do the shopping. Business offices had their own fleet of gondolas to take the chief to a meeting, the messenger to deliver his message. The once-poor sold their horses and donkeys (there were, and are, streets as well as canals in Venice) and opted for the upwardly-mobile-class symbol of the gondola.

Quiet, discreet, elegant, the craft was described as designed specifically "to give repose and respite from the clamor of daily life and business." It was the chauffeured limousine of its time, with a little *felze* or covered cabin in the middle, at first only a sort of tent to keep off sun and rain—equated with soundproof glass separating owner from chauffeur, as Venetians were consummate gossips and not at all averse to spying.

However remote the gondoliers may have been from whispered secrets and lascivious squirmings behind the draperies, they were inevitably privy to all sorts of business deals and amorous assignations, which they could divine merely by looking at the passengers. They became thus a combination of faithful family retainer, occasional blackmailer, and *ruffiano*, a word that sounds harsher than it really is. In use it means a sort of gentlemanly pimp and arranger.

Inevitably, by the 15th and 16th centuries wealth bred ostentation. Prow and stern began to be decorated with gold-plated irons. *Felze* were draped in velvet, brocade and golden gewgaws. It all became too much for the stern republic, whose firm position was that all citizens were equal and should comport themselves as such. Actually *La Serenissima* ("the most serene," as Venice was called) was more oligarchy than republic, but the Doge was elected and then rigidly supervised by both a Senate and the Council of Ten.

Austerity came in 1562 in a Senate decree. Henceforth all gondolas would be painted a discreet black, and all draperies would be black. No gold decor, no fancy dress for gondoliers, no statues scattered around. From that day to this, gondolas have been black.

Prohibited ostentation apparently didn't apply to foreign ambassadors, as there is in French archives a description of five gondolas that accompanied the arrival of an ambassador to Venice in 1682:". . . the first and second displayed gold-leaf sculptures and were enriched with a great number of statues and bas reliefs. The cabins' rugs and hangings were of crimson velvet."

Perhaps the Venetians themselves had made them, for they were not above skirting the law in the interests of the powerful. They made a glorious gondola for Charles II of England in 1661 and sent it off with four gondoliers. A contemporary report states that "One could hardly wait until it was taken off the boat, and when the four gondoliers got aboard . . . a great number of people gathered as if they had never seen a boat before." The republic also sent two gondolas to Louis XIV of France, who installed them in a miniature Grand Canal at Versailles. Others turned up on the Seine, the Rhine, the Swiss lakes.

Curve of ferro *symbolizes the Grand Canal*

One item changed little even under austerity: the iron or *ferro* at the prow, the rearing enigmatic decoration that still graces the gondola of today. Often perceived as simple ornament, it was instead one of the first adjustments made to the maneuverability of the craft. Because the principal gondolier (when there were two) stood at the rear, his weight and thrust needed to be counterbalanced at the bow. The *ferro*, which traditionally weighs about 35 pounds, can now be obtained in lighter and cheaper aluminum, but purists prefer iron, painted silver. Venetians explain proudly that the roundish top represents the Doge's *corno*, shaped somewhat like a Phrygian cap. The overall gentle curve symbolizes the Grand Canal. The six forward-thrusting teeth are the six quarters of Venice, the rearward one is the island of Guidecca.

Be that as it may, the *ferro* shape has existed for more than 300 years, longer than any costumes of the gondoliers. From the scruffy appearance of early slaves, the outfits moved to a definitely Turkish style, with balloon trousers and a short, tight jacket buttoned from navel to neck. Headgear was a tight-fitting round affair, with silver-stitched embroidery to indicate the household or business for which one worked.

Today's costume—dark trousers and a white blouse over a striped undershirt, topped sometimes by a jaunty straw hat (more tourists wear them today than do gondoliers)—may be a legacy from sailors' uniforms. "A lot of gondoliers a century ago came straight to the

The author's admiration and affection for gondolas rivals that of 19th-century British poet Arthur H. Clough, who is quoted in the article's headline.

Once the official measure of Venetian Republic, this *metro a once* is longer than either a yard or meter.

Brace is being positioned on half-finished craft by Roberto; others have been placed along sides.

canals from the navy, and they probably just kept bits of their old uniforms," a maritime historian guesses. Some of them may also have come from the old arsenal, which closed down in the middle of World War I and threw 8,000 men out of work.

Through it all there remained the small *squeri,* or boatyards that specialized in gondolas. One such, now in its 103d year, produced the last significant changes in gondola design a century ago. It is the Tramontin boatyard, where Domenico Tramontin in 1884 began building the first truly asymmetrical craft, its left side 9½ inches wider amidships than the right, and a bit deeper. Domenico skewed the flat bottom just a shade to the right to dampen the rotational effect toward the left when the gondolier thrust his oar to the right. He also cantilevered both bow and stern higher out of the water to reduce drag.

Domenico passed along his skills to his four sons, and nowadays his grandson Nedis and Nedis' son Roberto carry on the tradition. They persist, like faithful acolytes, in using traditional methods (no prefabri-

Tension must be applied so wood, which has been steamed into shape, will maintain its proper curve.

Roberto uses tiny brush to touch up small crevices. *Squero* is so dusty, paint must be put on outdoors.

cated parts, for example) and are perceived by gondoliers, maritime historians and nautical scholars as the best and last of a vanishing breed. Inside their three-sided brick boatyard with its wooden roof and stone-and-earth floor, there are no master plans, no design sketches for handy reference. All they need is the knowledge stored up in their heads and hands.

Before Domenico made his changes, the gondola had already become somewhat longer and lighter owing to a seemingly extraneous circumstance, the conquest of Venice by Napoleon in 1797. French troops brought down the longest-lived republic the world had ever known, and with it the glory days. The relatively rich might still keep a gondola or two, but could not afford two gondoliers for each. Consequently, the craft was made maneuverable by one man.

Then, in 1881, came the introduction of big steam-driven launches that Venetians still call *vaporetti,* or "little steamers," although they have long since been converted to diesel. Next came sleek motorboats that rush the importunate to railway stations or airports (as well as the police to disturbances and the firemen to conflagrations). The convenience and cheaper fares of *vaporetti* and the speed of the motorboats have reduced the gondola to mostly a tourist attraction today. From a high count of 10,000 that once glided through the canals, there are now only 400. At a price of $40 for 50 minutes, even some tourists prefer to photograph them rather than ride in them. The last privately owned gondola in Venice belonged to the late Peggy Guggenheim (SMITHSONIAN, July 1986), who left it to the city in her will. It is now in dry dock, gleaming and gracious, inside the Museum of Naval History.

The gondola fare is based in part on the cost of the craft itself, once borne by an affluent owner. Now the gondolier has become the owner and a Tramontin gondola costs about $15,000. Upkeep includes hauling it out of the water every 60 days or so to inspect the bottom for bumps, worms and such. Motorized traffic on the canals creates waves that bounce gondolas against mooring poles and retaining walls and, gondoliers say, even the increased water motion degrades the wood.

Wood, carefully selected to ensure it has no large knots or embedded stray bullets, is delivered.

"A gondola used to last the life of the gondolier," says Gino Macropodio, who has been in the business for 40 years and is the third generation of his family to do so. "I now have owned four of them, although two I am still using. One is standard, one is a gala for weddings or special parties or regattas."

Even at $15,000 a gondola seems a bargain compared to an automobile of the same price. It takes the Tramontins 500 man-hours to produce one, using eight kinds of wood they have seasoned for at least a year, and 280 individual parts, cut, fitted and assembled by hand. Nedis and Roberto can build only four or five a year by careful juggling of time and process, and have enough back orders to keep them busy for 20 years.

Time was when they even built them for export: Nedis shows an order from a promoter in Miami dated August 25, 1925. The man wanted 25 gondolas and he got them. They filled an order for Sydney, Australia, in 1955; for an Indianapolis restaurant in 1959; one each went to Chicago and New York in 1960; and to Atlanta in 1962. The only flat refusal they gave in those days was to a Japanese request for 50 in one year—the Tramontins threw up their hands. It has been more than 20 years since they built for shipment abroad.

Gondola construction begins on top of a *cantiere*, or sturdy wooden plank, fixed about a foot above the floor of the boatyard. It is the length of a gondola, shaped at either end to match the prow and stern curvatures, and marked off crosswise into sections by square iron posts about an inch high. Across the *cantiere* are clamped three master ribs, flat on the bottom and curved into a shallow U at the ends. Elm, a springy wood that can absorb shock just as human ribs do, is used for the rib sides, and the bottom sections are made of oak, for strength.

Onto these controlling ribs, and onto stout end posts of elm, are fitted long planks of oak to form the sides of the gondola. The tough oak must be bent to achieve the graceful curves of the craft. This is done by drenching the outside surface with water and heating the inside. Once the wood is wet, heat is applied by setting fire to a bunch of marsh reeds and holding the burning bundle close to the wood. The steam released softens the wood fiber so the 36-foot-long planks can be curved, then nailed to master ribs and end posts.

Next, the rest of the 33 elm-and-oak inner ribs, varying slightly in size and angle, are spaced accurately between those little iron posts and nailed home. Now the skeleton is complete. Bracing and supporting members of oak are set in place and four strong cross members of cherry are set in to hold the sides and stiffen the hull. Bow and stern deck planks of mahogany go on, fixed with tough wooden nails that won't disturb the underpinning. Extra support members at the stern will help bear the gondolier's weight.

At this point the entire structure is turned upside down on the *cantiere* and poised carefully for balance. Next the bottom is planked and shaped, again with burning reeds and water, to fit. Then right side up it goes to be planed, sandpapered and painted. Black is a most fragile color in water, the Tramontins point out, but having been decreed for 400 years it must be used. Builders search and research endlessly for a black paint that will survive sun and salt. They spend seven to ten days applying at least six coats to render the gondola a water-resistant and gleaming lacquerlike black. It is easy to understand why the battle cry of gondola builders, faced with troops of schoolchildren or wandering tourists, is "Don't touch!" as the innocent enter the inner sanctum of a *squero* to see a lustrous black vessel up on blocks ready—almost—to be launched.

Carved embellishments amuse the passengers

Even then it isn't finished. Gondola makers don't make oars, nor do they carve the frontispiece of the panel that covers the entrance to the gondolier's personal storage space near the prow. This little cavelike space is traditionally covered with a carved rendition of a myth or of marine life, to embellish the gondola and amuse the passengers. Yes, it's black. Often oar makers double as wood-carvers, produce the beech oars to measure (14 feet is standard, but oars may vary with size or preference of the gondolier), then etch the decorative covers of the gondolier's stash.

Most important of all, near the stern is the *forcola*, or oarlock. It resembles a bent arm with a big thumb

and forefinger. Concave scoops here and there brace the oar, affording the gondolier several options for changing his angle of thrust or depth of stroke for starting, stopping, turning, idling and speeding. It is always made of very tough, very well-seasoned walnut.

Then finally comes the day when the proud gondolier takes possession of his vessel, dreams of riches to come, puts his oar into the *forcola* and goes out, as his peers have done for a thousand years, into the canals. He need no longer call out "*A premi!*" or "*A stali!*" ("To the right!" or "To the left!") as he approaches a watery blind crossroad. There isn't that much gondola traffic now; all he needs to shout is a sort of "*Oi-e!*" to alert any other silent craft that he is in the vicinity.

He no longer sings from sheer pride or joy, as chroniclers insist he once did, and most tenors on the canals today are hired throats, usually accompanied by accordion players, laid on by groups of tourists who drift slowly through the lesser canals in clusters of three or four gondolas to share the cost of the music.

There are no longer the frequent rowing competitions for strong young gondoliers, and it has been a couple of centuries since long-haired ladies in what appear to be their chemises competed up and down the canals. Once a year still, however, on the first Sunday in September, everybody—young gondoliers, ladies and seasoned professionals—dresses up in historic costumes and churns the Grand Canal in the *Regata Storica,* or historic boat race, to the delight of Venetians and the ecstasy of tourists and Eastman Kodak.

The *regata* no doubt will continue and the gondolier will still sing if inspired by a beautiful young lady or a love-struck suitor who might produce a big tip, but the whole future of the classic gondola is in peril. It takes years to train a builder and the Tramontins have no heirs presently at hand. Labor laws would force them to hire the top man on some union list and pay him whether he were competent or not. The present administrators of the old *Serenissima* are asking for highly increased rent on the old *squero.* Nedis and Roberto have suggested that they continue to pay the former lower rent and use the difference to open a school of gondola building. They could take four or five youths, train them patiently, weed out the unsuitable or unwilling and keep the craft alive.

"If we cannot reach agreement," says Roberto with feigned ferocity, "we will close down. They can have their gondolas made in Japan."

In St. Mark's Square just before sunset, a gondolier awaits next customer as a breeze off the lagoon whips ribbon on his splendid hat. Uniform must be worn; the hat, optional, tends to be seen more on tourists.

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Aloft in the museum's main court, double outrigger fishing boat from East Africa rises above a part of the General's collection of firearms. Behind it are paddles. The cases hold specimens from all over the globe: musical instruments, writing materials, votive carvings, tally sticks, other counting devices.

Article and photographs by John Reader

Pitt Rivers Museum at Oxford offers a cultural cornucopia

A most extraordinary collection of artifacts documents Man's ingenuity and creativity in the mundane—and elegant—over millennia

Collector Pitt-Rivers is surrounded by two of his books, an 1881 letter to A. W. Franks discussing a new home for his artifacts, New Ireland paddles.

There is a treasure house tucked away in a hidden corner at Oxford, an enchanting museum that sparkles with the cultural imagination and ingenuity of mankind. Its display cases are packed with an amazing assortment of ancient and contemporary implements, instruments, objects and items from all over the world. Not just the rare and the precious, although there is plenty of that—there are everyday things such as screwdrivers and doorknobs. Begun more than 130 years ago, the collection has been expanding ever since, until today its breadth and quality are unmatched.

At the entrance to the central court a glass case crammed to capacity with religious effigies—early Christian, Buddhist, Taoist—stands opposite a display of masks. A partially unwrapped Egyptian mummy excites the question "Is it real?" from among a group of children. Others stand silently gazing at Eskimo rain capes made with strips of translucent walrus intestine, while a voice calls "Come and look at this!" from beside a display of shrunken heads from South America.

A squat figure, three feet high but with full-size head and feet, stands near the case of religious effigies, its black wooden body bristling with a good 50 pounds of nails. Large writing on the label declares it a nail fetish. Any wish for further information requires a visitor to kneel, for the label lies at its feet. Smaller writing reveals it was brought from a village near the mouth of the Zaire—formerly the Congo—River by traveler-lecturer Mary Kingsley in the 1890s; each nail represents a villager's malicious wish.

The weight of feeling hammered into that passive hunk of wood is enough to give a visitor pause. Take a rest in one of the three chairs, *kubbestol*, from Norway, cut from solid tree trunks in the late 18th or early 19th century. Long use has brought a rich patina to the wood. Much of the deep red-and-blue pattern has worn away, but some milk teeth still stud the chairs' edges, where they were set to ward off toothache during the lives of previous owners. A shark-fishing outrigger canoe from Melanesia hangs above the *kubbestol*, a sleek and slim white-painted craft with flares of wood rising from prow and stern in the manner of the dorsal fin that distinguishes its quarry—there is an air of quiet and sinister purpose. Next to it hangs a raft of logs lashed together in cheerfully makeshift fashion; beyond that more canoes: birchbark from Canada, eucalyptus bark from northern Australia and "woodskin" from South America. The coracle from Ireland is covered with leather; the planked canoes from Uganda and Sarawak are stitched together with

Doll collection includes clay, Cyprus; painted clay and straw, Yuma Mojave; wood, Naga; mud and honey, Bornu; Eskimo; below, Coptic; rhea, Paraguay.

Alligator hook at top; four fish hooks, inlaid wood and bone, New Zealand; large Hawaiian bone-and-bent-wire shark lure; Eskimo fish-shaped hook.

Tyrolean horn-bowl pipe at left; next, Uganda three-bowl and Naga Hills model. Diagonals are curving wooden pipe, Alaska; English country cherry.

Vertical incised, stained flutes are from north Assam, Zaire, Taiwan; diagonal, Sarawak; pictures of double nose flutes: left, Formosa; right, Malay Peninsula.

Everyday combs, clockwise from top left: Persia; three, Solomons; inlaid, Haida; Naga has goat hair. Ivory is from West Africa; diagonal, Somalian; last, Japan.

Wooden locks in top row from Faeroe Islands and Crete; center, Nubian lock and key; bottom left, Egyptian; inlaid lock, Damascus; a Coptic wooden key.

fiber, the Maori are extravagantly carved, with clusters of feathers tied along the waterline.

Behind cases displaying model houses of wood, stone, straw, skin and ice, draw back a curtain and press the time switch. Light illuminates a chief's cape from Hawaii, red and yellow, thousands of delicate feathers tied to make a pattern that blazes like flame. The museum has two of these priceless treasures but not everyone finds them—most visitors are attracted to the 40-foot-high totem pole from the Queen Charlotte Islands, dominating that end of the court, or distracted by the musical instruments. Perhaps the opium pipes have caught their attention, or the snuff-taking devices.

A latticed map and bamboo lancets

Then there are the navigation aids—among them a beautifully tied stick-chart of island landfalls from Micronesia—a "map" with latticed strips of wood indicating wind direction and ocean currents, with cowrie shell "islands." There are cases of magic, sorcery and votive offerings; pots, tools and axes; weights and scales from Burma, Sweden and Ghana clustered together. Agricultural tools, toys and dolls next to a case of surgical instruments that include bamboo lancets and homemade hypodermic syringes. Jewelry, belts and necklaces; armlets. Sports equipment. Spears, bows and arrows, boomerangs. . . .

Cases are crowded together in the court and around galleries above, creating a maze of narrow passageways. The museum is not designed for everything to be examined and every neat, handwritten label to be read. On the contrary, it invites flitting from case to case. All the specimens are examples of human invention applied to the pursuit of an idea or to the solution of a problem by people of all colors, creeds and cultures—adding more than a twist of irony to the fact that the man who founded it in 1884, Lt. Gen. Augustus Henry Lane-Fox Pitt-Rivers DCL, FRS, FSA was, in today's terminology, a racist. Pitt-Rivers, along with many a Victorian colonial Englishman, believed the world's various peoples were inherently different and could be distinguished one from another by their degrees of cultural achievement. He devised a theory, collected evidence from around the world that he thought would substantiate it and founded the Pitt Rivers Museum (no hyphen) to promote his views of cultural evolution as an indicator of racial and social separation.

"The General was an 18th-century man with a 20th-century brain living in the 19th century. Quite a mixture—traditionalist, full of ideas and authoritarian," Anthony Pitt-Rivers begins rather grandiosely, when asked for an account of his great-grandfather. "But he was a pretty tiresome character," he continues with a chuckle, "irascible and absolutely hellish to his wife. He would chase her with a poker if she lit a fire he considered unnecessary." Pitt-Rivers' farms on the Dorset estates passed down from his great-grandfather. He recounts Bertrand Russell's description of the family as "all more or less mad" and delves into the complexities of British genealogy to explain how the General had inherited 25,000-acre Cranborne Chase. It was a very long shot indeed. The General had started life in 1827 as Augustus Henry Lane-Fox. Twelve lives stood between him and the Pitt-Rivers name and estates. But over the years several cousins and his elder brother died young, numerous aunts remained unmarried or childless or without male heirs. So in 1880 the succession passed to the General, who was obliged by the terms of the bequest to adopt the name Pitt-Rivers.

At the time of his inheritance he was 53 years old. The lands of Cranborne Chase provided numerous prehistoric, Roman and Saxon sites. There he invented the section method of excavation, meticulously mapping every artifact he found. This established him as the "father of modern archaeology." The larger income provided further means of promoting his ideas, which by then were firmly set. He had grown up during the decades when the Industrial Revolution changed the very nature of British society and when science—notably through the writings of naturalist Charles Darwin and of philosopher Herbert Spencer—was affirming that nature itself was subject to change, evolving from simple to more complex forms, and that societies followed suit. Pitt-Rivers declared that cultures too had evolved from the simple to the complex—with conflict and war their motivating forces.

Mastering "the brute creation"

This theory was rooted in the military experience of its promulgator. In *The Evolution of Culture,* published in 1875, he wrote that culture was founded in mankind's "struggles for mastery with the brute creation," when Man's "first lessons must have been directed to attaining proficiency in the art of war . . . nor indeed shall we fail to find abundant evidence that there is hardly a branch of human industry which may not reasonably be attributed to [that] source."

The so-called savage races, primitive cultures everywhere, were a crucial element of the Pitt-Rivers theory. They were surviving relics of the early stages of cultural evolution, he believed, in much the way frogs might be considered surviving relics of the transition from fish to reptile in biological evolution. The various degrees of development he observed in weapons and implements that he collected from different places around the world indicated to him varying degrees of cultural development and, indeed, of the capacity for development. Pitt-Rivers produced a hierarchy, with

the educated gentleman of the Victorian era at the top, the surviving "savage races" at the lower levels and the British working class somewhere in between.

The General believed that the savage was doomed. "The savage is morally and mentally an unfit instrument for the spread of civilization," he wrote, ". . . his place is required for an improved race. Allowing for the rapidly increasing ratio in which progress advances, it is not too much to assume, that in half a century . . . savage life will have ceased to have a single true representative on the face of the globe. . . ."

Donations from travelers and diplomats

In the meantime, he was anxious to collect as much evidence of their cultural status as he could. The United Services Institution, founded in 1831 "to foster the desire of useful knowledge" among its members, was a primary source. The institution had a good library, a substantial collection of "semi-civilised and savage weapons" from around the world. More important to Pitt-Rivers, the institution—and various societies promoting exploration and scientific inquiry—brought him into contact with travelers, consular representatives and officers recently returned from service abroad, many of whom had brought home items they were willing to sell or donate to his collection. The General traveled about Europe, and military service took him to Ireland, Malta, the Crimea and Canada—all sources of useful contemporary (and some prehistoric) material. But apart from a trip down the Nile in 1881, he himself made no distant excursions in search of cultural evidence. For the evidence of more distant and "savage" cultures he was entirely dependent upon others. He lectured and published, and his interest gradually became a mission to educate Victorian Britain in the theoretical distinctions by which he believed progressive stages of human development could be identified.

In 1874 Pitt-Rivers put his collection in a branch of the South Kensington Museum at Bethnel Green in London. It now had expanded to several thousand items, and its purpose was evident in the manner of its display. Specimens were arranged typologically, strictly according to the type of object regardless of geographic origin. Within each display the objects were arranged in series according to the stage of cultural evolution they were believed to represent. The more complex, the more advanced. By inference, the people who made the objects were graded too.

The General maintained close contact with his collection, adding to it constantly, removing items as he pleased and always feeling entitled to stipulate the manner of its display. In 1878 it was moved to more commodious rooms in South Kensington. Upon his

Until the early 1900s notable Maori men and women went in for facial tattooing that conforms to very strict

inheritance in 1880, Pitt-Rivers advised the already somewhat harassed curators he would now acquire specimens more rapidly and would need double the space—immediately. With all the beneficence of new wealth, he offered to pay for staff to supervise the artifacts and explain their message to visitors, indicating that he was prepared to give the collection to the nation—provided adequate space was allocated and he was granted lifetime control. Failing this, he would build his own museum, he wrote to a colleague, or might even leave everything to the United States.

The offer was declined, but the General did not leave everything to the United States, nor did he build his own museum. He gave his material to Oxford University, stipulating that the university build a museum to house it and appoint someone to lecture on it. Terms of a Deed of Gift made and accepted in 1884 obliged the General to relinquish any right to borrow from it as he pleased but granted him overall control until death.

The university began construction of an annex to its existing museum, appointed Edward Burnet Tylor

Preparing his book Man on Earth *for fall publication, Mr. Reader found the museum and was captivated.*

design rules, as in these preserved heads. Long metal and bamboo tools are a tattooist's instruments. Center, from left: Maori carved wooden funnel and box, then Burmese lead weight, were also used during process.

lecturer in anthropology (thus establishing Britain's first academic post in the subject) and called upon a young Trinity College research student, Henry Balfour, to assist with the unpacking, labeling, arrangement and display. Having spent seven years at the task, by the time the museum opened to the public in 1891 Balfour was well qualified to become its first curator, an appointment he held until his death in 1939.

The General became increasingly displeased with arrangements at Oxford during the years that his gift was being readied for public exhibition and seems not to have thought very highly of Henry Balfour. He complained that some series had been rearranged without consultation. He interpreted a paper Balfour read to the Anthropological Institute as unflattering (it referred to Pitt-Rivers only in a footnote) and was outraged when Balfour asked permission to publish a paper. "I . . . object to anything whatsoever being published about the museum or any part of it by any of the officers charged with the arrangement of it, until I have had the opportunity of describing the collection," he replied. Balfour drafted some intemperate reactions to the General's complaints, which are preserved in the museum archives, but posted only careful and placatory replies. Responding in November 1890 to complaints about delays, for instance, Balfour calmly expressed the hope that the General might be able to travel to Oxford and open the museum the following spring. The event took place at the end of April 1891.

The opening of the Pitt Rivers Museum virtually ended the General's direct association with his magnificent gift. Thereafter, until he died in 1900, he devoted his energies and his fortune primarily to the excavations at Cranborne Chase and to the establishment of his own museum. In the end, the General had misgivings about having given away his original collection. "Oxford was not the place for it and I should never have sent it there if I had not been ill at the time," he wrote to the President of the Anthropological Institute in 1898. "I have always regretted it, and my new museum at Farnham, Dorset, represents my views on the subject much better."

The Farnham museum no longer exists. Although a large permanent exhibition at the Salisbury Museum preserves an excellent record of the General's life and times, especially in respect to the archaeological excavations at Cranborne Chase, the Pitt Rivers at Oxford remains the best representation of his racially-

Models are irresistible to all ages and in all eras; most of these boats, including three with elaborate painted designs from Vancouver Island and Nootka Sound, were from the General's original collection.

motivated theory of the evolution of culture. At the time of his gift, the collection included more than 15,000 specimens. In the century since then it has expanded to well over a million, with contributions from many ethnographers.

Although named for Pitt-Rivers, the museum bears the indelible stamp of Henry Balfour. Staff members, when asked for an opinion of the General, are apt to hesitate and look slightly nonplussed before delivering a few gobbets of obligatory praise. Then ask about Henry Balfour, a man of great personal charm and erudition, skilled oarsman and founder of the Oxford fencing club, and their warm smiles alone tell a very different story. The museum was Balfour's life. He worked there for more than 50 years, traveling back and forth in his chauffeured Rolls-Royce, and although the museum began with the specimens Pitt-Rivers had collected to substantiate his personal theories on race, culture and evolution, Balfour's more open-minded and scientific approach has assured its subsequent stature. He displayed the specimens according to type, as the General had stipulated, but expanded many series and introduced several of his own.

Balfour brought two invaluable attributes to the task. First, a private fortune that enabled him to travel more widely—to Nigeria, South Africa and Madagascar; Norway and the Lapland region, Assam, Indonesia and Australia; Japan, the Pacific and the United States—than university funds could ever permit; and second, a unique combination of curiosity and wide-ranging interests. When Naga tribesmen in Assam offered freshly roasted grubs, he kept one for the collection and ate the rest, declaring them delicious. He made a special study of whales and whalers and demonstrated that the drumming noise of snipes in flight is caused by the vibration of their outer tail feathers. This solution of a mystery that had puzzled generations of ornithologists is a clue to Balfour's absorption with sound and with musical instruments.

Pitt-Rivers' original collection included about 300 "rather ordinary" examples of the latter. Balfour expanded it to more than 5,000 items. Within the general classifications of wind, string and percussion he collected widely, never overlooking the commonplace, al-

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ways preferring to take old, used instruments. Among the treasures are 16th-century virginals and 20th-century street organs; trumpets, end-blown and side-blown, of horn, birchbark, clay, shell, bone, ivory and leather; zithers of stick, raft, cylinder and box construction; lutes and fiddles from Norway, India, Borneo, Turkey and Ecuador; clarinets and oboes from England, Japan, Algeria and New Guinea; a Burmese beggar's violin and one of the play-then-eat licorice pan-pipes popular among children in wartime Britain.

The geographical breadth and typological depth of Balfour's musical interest expanded the General's gift into the most comprehensive and informative collection of musical instruments in the world. More than 1,000 are now displayed in the Balfour Building, a gallery built with funds from the bequest of his son, Lewis, who died in 1974. By the nicest possible coincidence, a letter discovered since it was built reveals that a music gallery was Henry Balfour's long-standing wish. "What I want," he wrote to his counterpart at New York's Metropolitan Museum in 1907, "is the money for an annex to the museum, so that I may have a whole room for music."

In the 100 years since Henry Balfour arrived, there has been meticulous documentation of specimens, according to Dr. Schuyler Jones, cultural anthropologist and the present curator. As a result, "the Pitt Rivers has become an international center for research in cultural anthropology. We have a constant stream of scholars from all over the world. Here now are musicologist Li Lisha from China, Maori specialist Elizabeth Mountain-Ellis of New Zealand, and North American Indian scholar William C. Sturtevant from the Smithsonian."

The museum is also a teaching department of Oxford University, where Dr. Jones heads the Department of Ethnology and Prehistory. "We want the collections to be a voyage of discovery for the general public as well," Jones continues. "There are a couple of dozen examples of how to make fire without matches, and numerous ideas on curing illness and on explaining mysteries. That nail fetish is one of my favorite examples of what we have to offer. Such a grotesque and foreign thing—yet how easy it is to sense the depth of feeling it represents."

The General's single-minded determination to substantiate his racist theory is from an era long past. Today's Pitt Rivers speaks to the collective creativity of people everywhere, to the wealth and range of concepts that various cultures have to offer. Finding better ways to do things has been, needless to say, very different in the Arctic, the desert and the jungle, but the end result is a communality of invention the world over, invention that has been amended and improved, and succeeded by newer and better, generation by generation.

A very important aspect of museum affairs is acquisition. "A museum has to keep on collecting contemporary material," explains Jones, "otherwise it becomes no more than a storehouse of old information." But whereas both Pitt-Rivers and Henry Balfour had private means to help them pursue the collection's interests, the present administration has only a university budget of about $540,000 per year to fund its entire operation. There is little left for the purchase of specimens after the staff of 33 and all the maintenance bills have been paid, especially in these days of the Sotheby-Christie syndrome, when a Hawaiian wood sculpture can fetch $375,000, a Benin bronze more than $100,000. Even a feather cockade from the Amazon might be worth $1,000. "We allocate $3,000 per year for the purchase of specimens," says Jones, "which is a huge improvement on arrangements up to 1975, when nothing at all was allotted. We are lucky with donations from scholars and the public, but collections made by graduate students on field studies are our most important source. Three thousand dollars does not go far, but it does enable us to provide our graduate students with funds to cover purchase, package and post of their collections."

The Pitt Rivers makes no judgments, builds no hierarchies—it simply inspires wonder. The General began collecting combs, for instance, from a variety of places around the world with the intention of showing how all the makers had been equally primitive. We now see them as untainted, beautiful examples of skills common to all people, applied in distinctive ways to a common aspiration—improvement.

Portrait of Henry Balfour is perched on million-entry card file. Feather ear ornaments are from the Angami.

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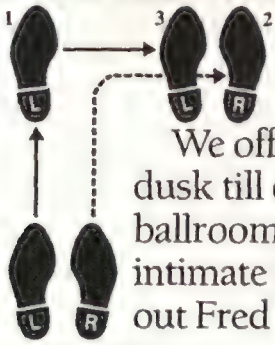

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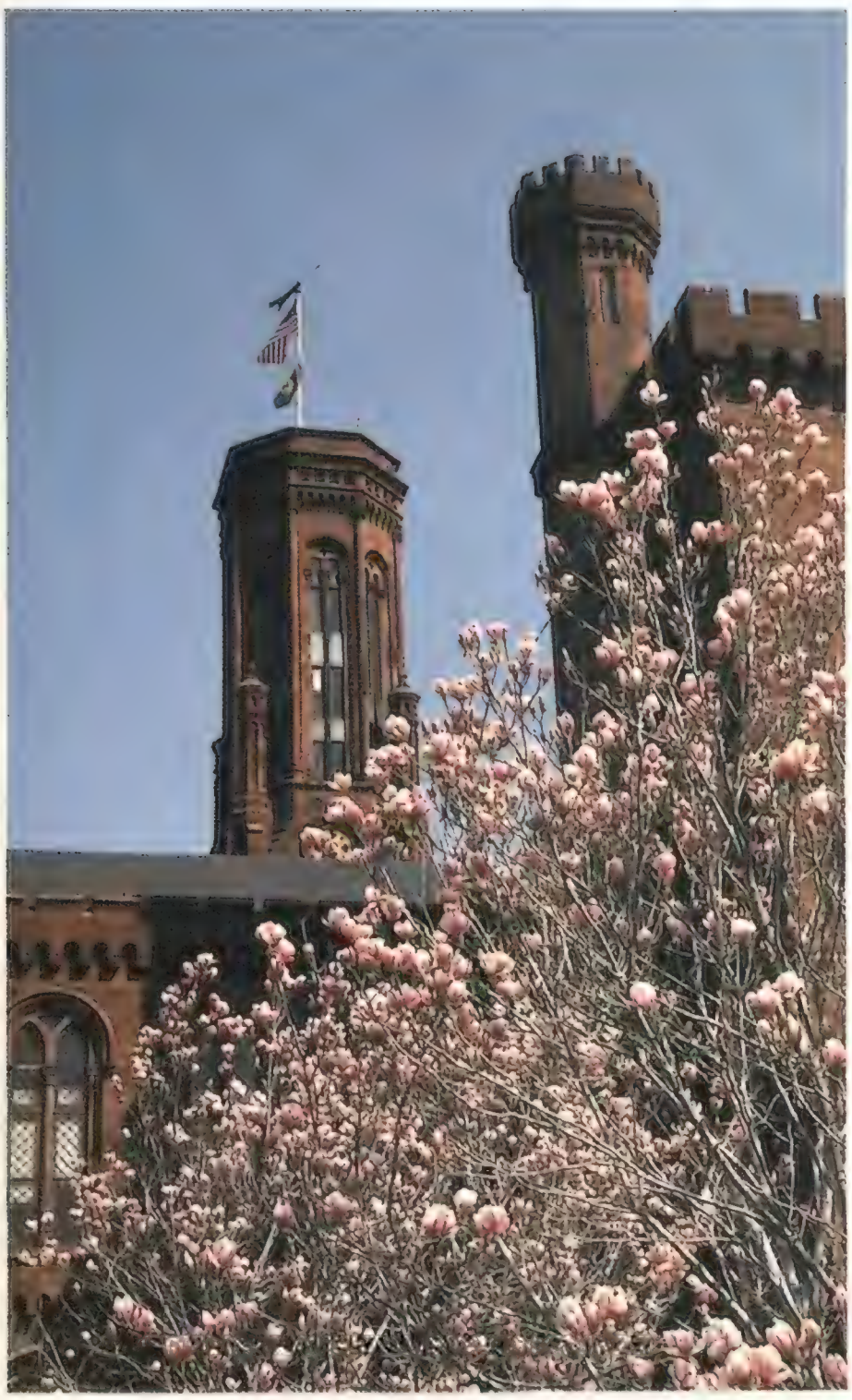
By James R. Buckler

A surprising new oasis blossoms at the Smithsonian

The Enid A. Haupt Garden, filled with mature trees and colorful flowers, takes root above the new underground museums on the Mall



Castle towers rise above blooming saucer magnolias planted in rows to form *allées* of 13 matched pairs.

During their explorations of the Mall's museums this summer, Smithsonian visitors will find behind the Castle a leafy retreat where they can stroll, lounge and —we hope—be pleasurably deceived. If the fully grown trees and shrubs in this 4.2-acre garden make people feel that they are visiting the grounds of a fine old estate, then our illusion will have been successful, for just a few months ago the area was a major construction site, a muddy landscape dominated not by trees but by tower cranes, dump trucks and air compressors.

The Enid A. Haupt Garden, as it is known, sits on top of the underground quadrangle complex (SMITHSONIAN, February 1983) that will open in September; only a few feet beneath the grass and flowers are the new National Museum of African Art, the Arthur M. Sackler Gallery (devoted to Asian and Near Eastern art) and the International Center. When the design for the complex was still in the planning stages, S. Dillon Ripley, then Secretary of the Smithsonian Institution, envisioned a Renaissance rooftop garden at ground level and had it included in the original architectural drawings. In 1983 he asked his longtime friend Enid Annenberg Haupt to look at the plans. She is well known as a generous benefactor of horticultural projects, and it is not surprising that her initial response was a question: "Can you guarantee me that the plants will be magnificent specimens, and the trees will be so large that when I walk into the garden on opening day it will feel like a mature garden? . . . since, you know, Dillon, I am getting on." Ripley responded, "We will put in grand specimens if we have enough money to do so." Mrs. Haupt replied, "Well, Dillon, how much will it cost me?" Ripley quickly answered, "Three million dollars."

On May 22, the garden was opened to the public. The main entrance is set off by magnificent iron gates re-created from an 1849 drawing of a pair of gates by

Victorian embroidery parterre design is based on one used at Philadelphia's 1876 Centennial Exposition.

Stately iron entrance gates (top) were created from an 1849 design by Castle architect James Renwick jr.

Photographs by Robert C. Lautman

A quiet oasis opens on the Mall

Castle architect James Renwick jr. A large Victorian parterre fills the center garden leading to the Castle entrance. Historically designed to be seen from a considerable height, the parterre is carefully laid out in geometric arrangements using great numbers of colorful annual plants. Thirty thousand pansies were propagated for the spring opening, 35,000 Joseph's coats for the summer months and 15,000 ornamental cabbage and kale are being grown for fall displays. Nineteenth-century-style street lamps with hanging baskets filled with brilliant flowers highlight the garden. The Smithsonian's fine collection of antique cast-iron garden furniture, urns and wickets lines the walkways that surround the parterre and wind through the terraces and among the trees.

There are two special gardens near the entrances to the new quadrangle museums. Outside the African Art pavilion is the fountain garden with rills and paved walks and fountains reminiscent of the so-called "Andalouse" influence in North Africa. The Sackler Gallery pavilion faces the granite-island garden, entered by walking through one of two 9-foot-high granite moongates and shaded only by two Japanese weeping cherry trees.

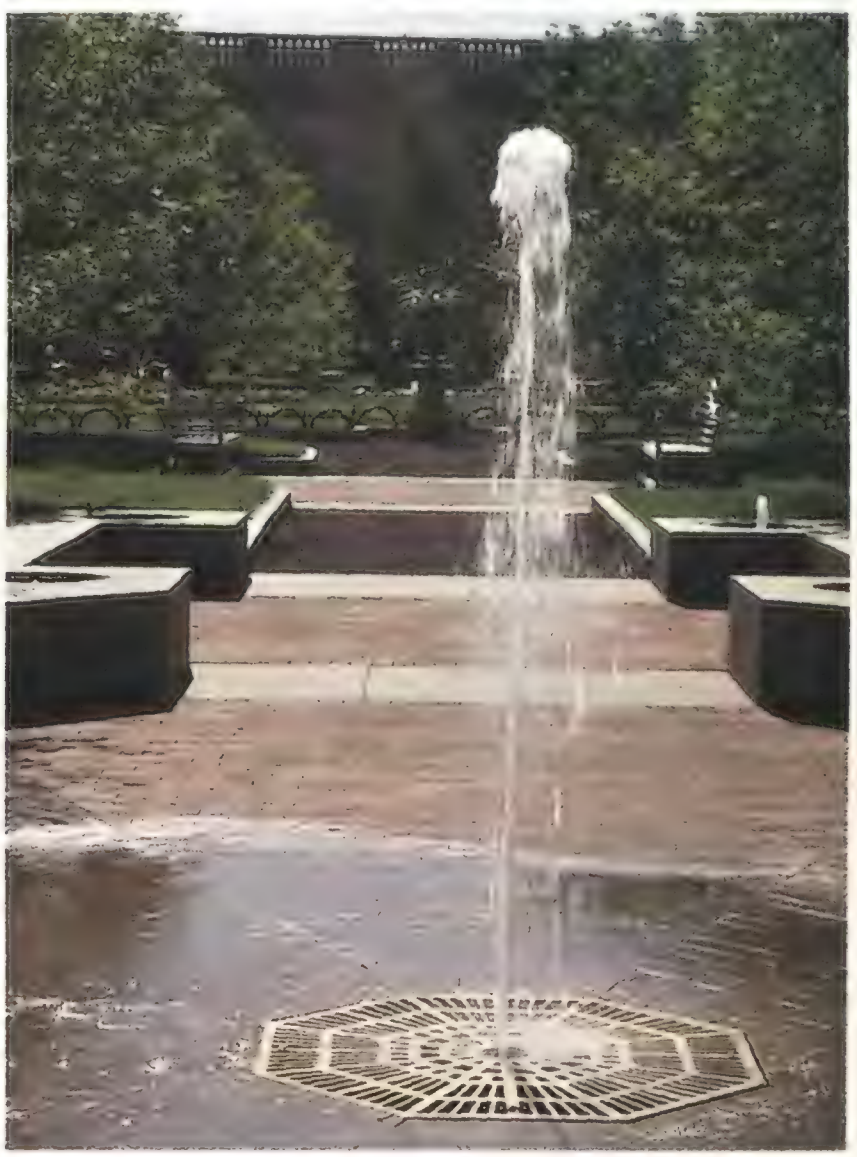
The Haupt Garden site was originally called the "South Yard" when work on the Castle was completed in 1855. In old photographs it appears to have been planted informally with trees, and a gardener's cottage stood where the Arts and Industries Building stands today. Carriage drives curved through the South Yard as part of landscape designer Andrew Jackson Downing's master plan for the Mall, and there was a cistern to collect rainwater for everyday use by the family of Joseph Henry, first Secretary of the Institution, which lived in the Castle. During the 1880s, American bison were penned in the South Yard in an early effort to preserve an endangered species before the National Zoo-

Parterre was planted in patterns with 30,000 pansies and several variegated yucca for opening day ceremony.

During the summer months, Horticulture staff may water the baskets of flowers two or more times a day.

Nineteenth-century cast-iron wickets (in background) circle borders of the garden to keep out pedestrians.

The final parterre plans are reviewed by (from left) Mrs. Enid A. Haupt, Buckler, Secretary Robert McC. Adams, Director of Facilities Services Richard L. Siegle and S. Dillon Ripley, the Secretary Emeritus.



Water jet in the center of the fountain garden is echoed by small bubblers sunk in granite benches.

Work crew struggles to plant a 50-year-old English boxwood alongside the Arts and Industries Building.

Reproductions of 19th-century lampposts still found in Washington will illuminate garden after dark.

logical Park was established. In 1892, an astrophysical observatory was built; it later served as a research laboratory for Charles Abbot, the fifth Secretary.

Added to the growing, motley array of buildings was a carriage house that later became a preparation lab for mammal displays, with a greenhouse for solar experiments. Before the National Air and Space Museum was built, part of the aviation collection was exhibited in an old World War I hangar in the South Yard, with missiles and rockets set up on a nearby sidewalk. In 1975, this assemblage of relics came down to make way for a Victorian garden intended to complement the Philadelphia Centennial Exposition in the newly restored Arts and Industries Building.

At that time I was hired as director of the Office of Horticulture and told to research, document and install this Victorian garden. I recall that during my interview with Secretary Ripley he cautioned me "not to fall in love with that garden" because he planned to remove it to build the quadrangle complex.

The garden proved to be popular, so it was a sad day in 1982 when we began the dismantling—transplanting specimen trees and shrubs to other Smithsonian grounds, storing the garden furniture, and returning exotic and tropical plants to their greenhouses before the bulldozers arrived.

Designing and building a 4.2-acre garden with planting areas varying in soil depth from three feet (over parts of the three-story underground museum complex) to full depth around the Castle turned out to be a challenge. Quadrangle architect Jean Paul Carlhian of Shepley Bulfinch Richardson and Abbott designed the garden and its architectural features and supervised the implementation of the overall design. Sasaki and Associates prepared the construction drawings, laying out all the underpinnings of the complex garden—utilities, sprinkler systems, lighting, fountain mechanics, pathways and contours. Lester Collins, consultant landscape architect, worked closely with Secretary Ripley on the original plant list and planting plan. As work progressed, Collins frequently walked through the garden with Jean Paul and me to assure that it was going to look as Secretary Ripley and Mrs. Haupt had envisioned. The Office of Horticulture searched for the giant trees, grew thousands of plants in Smithsonian greenhouses, designed the parterre and acquired and restored the unique collection of antique garden furniture.

The practical aspects of constructing an underground building open to the public had its impact on the garden itself. There are eight granite- and sandstone-faced structures that provide exits for emergency stairs. Four of these are placed together and contain two 117-foot-long skylights that allow natural light to reach the exhibition galleries below. Two others are faced with red Seneca sandstone salvaged from a condemned Washington jail, stone that was taken from a local quarry at about the same time as that of the Castle and thus blends perfectly. Slow-growing climbing hydrangeas ornament the structures, making them integral parts of the garden. A steel trellis that covers a service ramp for trucks making deliveries to the museums below will soon become a leafy sea, overgrown with pink-blooming wisteria.

During construction, perhaps the most concern was expressed for the survival of the much-loved, venerable linden tree that has been a landmark in the South Yard for a hundred years. In preparation for the construction and to help minimize the shock, its branches were cabled for support and a lightning rod was installed. The tree was sprayed for aphids and other pests, and a misting system was specially designed to wash the leaves and keep them free from construction debris. A chain-link fence was installed around the linden and kept locked to all but Horticulture Office personnel. (Within the protected enclosure that was filled with overgrown weeds, a wild red fox made its den at

James R. Buckler is the Director of the Office of Horticulture and his responsibilities include overseeing all of the gardens at the Smithsonian.

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Entrances to the granite-island garden are through two 9-foot moongates. Architect Jean Paul Carlhian's design concept was inspired by Beijing's Temple of Heaven.

the base of the tree. Although the fox disappeared when the construction work was completed in the spring, we hope it has found another safe site on the Mall.) Any work done near the tree was performed by hand, including the preparation of new paths around it. Most striking, though, were modifications made in the design of the museum complex so that it would not interfere with the tree's root system. Not surprisingly, given this amount of care, the linden has fully leafed this year and appears to be thriving.

The search for the other trees and shrubs to fill the new garden began in 1983. Members of the Horticulture staff scoured nurseries and old estates throughout the East for the large exhibition-quality specimens needed in order to plant matched sets of trees along walkways and against building walls. In the areas where the underground rooftop determined the soil depth, the choice of trees was limited to a specific type of root system and to species that would readily adapt to an urban environment. It was not an easy task to live up to Mrs. Haupt's concept of a fully mature garden on opening day. Once located, the trees had to be able to withstand transplanting to a roof garden. We found that very few nurserymen are experienced in handling an 8-foot-diameter root ball that weighs four tons. After hundreds of phone calls made, and hundreds of miles traveled, we attached tags to the treasured trees that we had located. Even when we thought we were safe, we found we still couldn't relax: on return trips to inspect our finds, nursery tags had sometimes mysteriously disappeared. After searching for two years for the perfect thornless cockspur hawthorns so important to the forming of an umbrella canopy in the fountain garden, we got a lead and thought them secured. But just a week before, convinced that the trees would never sell, the nursery owner had had them bulldozed.

When the garden opened, however, we quickly forgot all of our frustrations. We have 26 matched, 20-foot-high saucer magnolias forming *allées*. There are 15 little-leaf lindens, each standing 18 feet high, along the main entrance. Against the Castle facade are 14 American holly trees and a 40-foot weeping beech. Special equipment was needed for transporting and planting these notable trees. We found a 30-ton crane with a 120-foot-long boom just to move one weeping beech. And we had to get specific permits to carry trees with root balls more than eight feet across. Once they were planted, we had to be vigilant for damage from construction equipment and debris. Before the move, most of these trees had known only nursery or residential care; now they were required to thrive in an urban garden with no natural water table. "Their survival has been remarkable," says Katherine Meehan, special assistant to the Director of Horticulture.

Back in 1983, Jean Paul Carlhian summed up the garden's design requirements: "The garden should be simple, noble and grand rather than complicated. This is a public space, not a private retreat. It is a garden for all seasons." I think these challenges have been met, and a walk through the Enid A. Haupt Garden today seems like stepping into a quiet oasis that has been there for years.

Kiosk at back is an entrance to underground complex; verdigris trellis covers skylight for galleries below.

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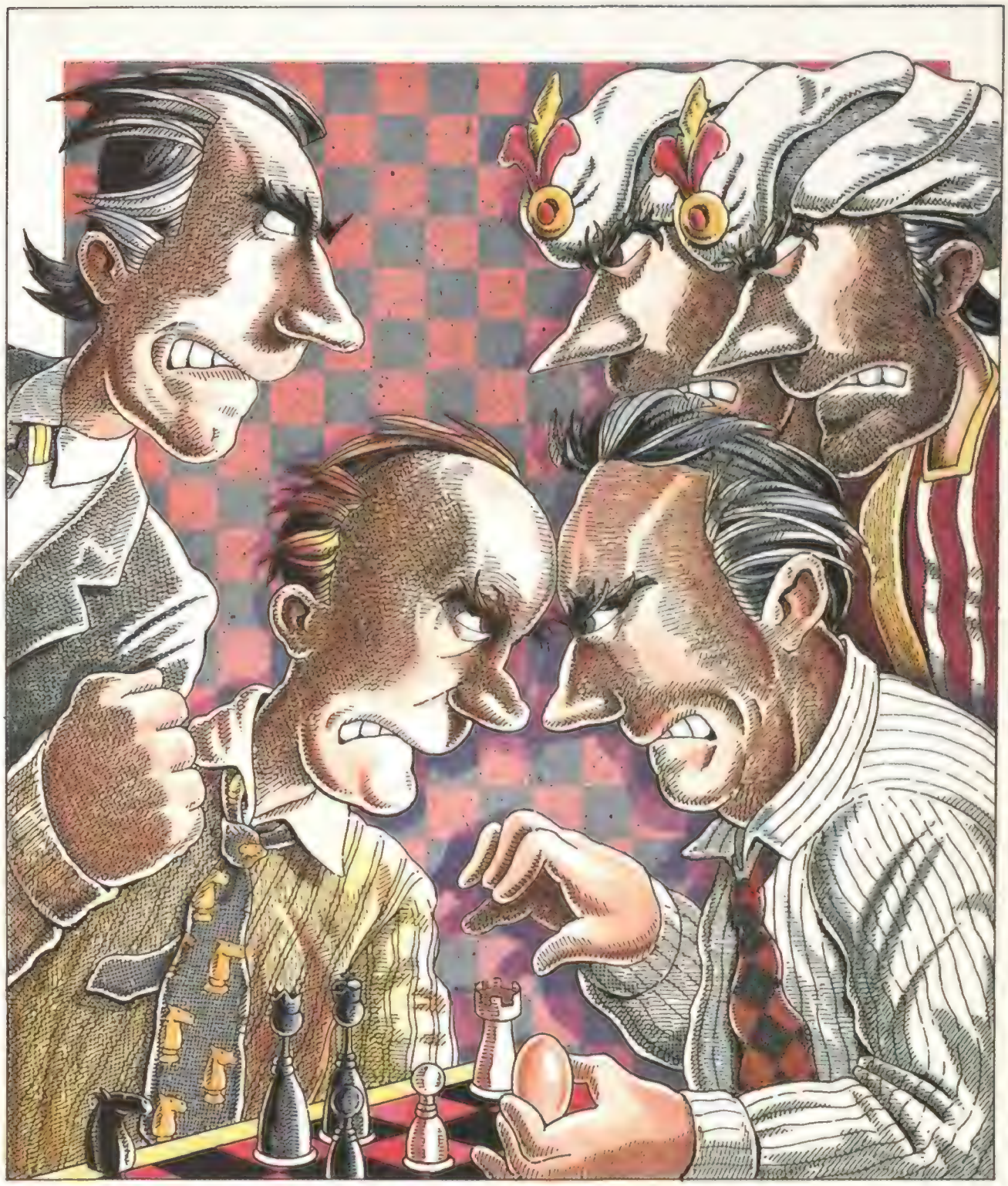
By Paul Hoffman

A chess player realizes the game controls his life

A reformed addict describes a time when only what took place on the board seemed real



In their duel for the world title, Karpov hired a reputed parapsychologist (left) and Korchnoi recruited two robed mystics.

In his 1775 *Dictionary of the English Language*, Samuel Johnson defined chess as a "nice and abstruse game, in which two sets of puppets are moved in opposition to each other." Chess, however, is not the innocent recreation this quaint definition suggests. It is a passionate game that somehow appeals to the deepest recesses of the human mind. When the Soviet world champion Gary Kasparov defends his title this fall in a long match against ex-champion Anatoly Yevgenyevich Karpov, the two men may well behave in bizarre, unfathomable ways. In the 1978 world championship, in Baguio, the Philippines, Karpov asked the so-called parapsychologist Dr. Vladimir Zukhar to sit in the audience and hex his opponent, Soviet defector Viktor Lvovich Korchnoi. But Korchnoi responded in kind; he recruited two saffron-robed mystics, Didi and Dada, who were under indictment for attempted murder, to meditate in the tournament hall.

Strange behavior at the highest echelons of chess is nothing new. Paul Morphy, who in 1858 was the first American world chess champion, believed that people were trying to poison him and he refused to eat food unless it was prepared by his mother or younger sister. Newspaper obituaries attributed Morphy's growing insanity and subsequent death to mental overexertion from "blindfold" chess: the playing of the game in your head without sight of the board.

When the world champion Wilhelm Steinitz lost a match in 1896, he began to lose his mind, too. He believed that he could talk to people on an invisible telephone and waited around for it to ring. After he failed to make a comeback in an important tournament, he apparently claimed that, over his special telephone, he had beaten God at chess in spite of having generously given Him the advantage of the first move and the odds of a Pawn.

It is not my intention to make sense of the relationship between the game itself and the aberrant behavior of the monomaniacs who play it at the highest level. Chess and insanity are certainly somehow intertwined—not only for top-ranked masters but also for dedicated amateurs. I know from my own experience. I devoted a few years to the game and discovered that long before you reach master strength you lose interest in virtually everything

Illustrations by Cameron Gerlach

A world champion of the past century, Wilhelm Steinitz once claimed he had beaten God at chess—over a telephone line.

that happens off your chessboard.

My association with chess began when I was 5. I had been stung by a swarm of yellow jackets, and to keep my mind off the pain, my father taught me how to play chess. Little did he know how much of a distraction it would become. Even in my feverish condition, I immediately took to it. From the start I loved the element of control: nothing was left to chance or luck. Although I made many stupid moves and hardly knew what I was doing, I realized that the chessmen were under my command. I promised myself that I would learn to coordinate them and would master whatever secrets were concealed in the 64 squares. I stopped short, however, of painting a chessboard on the ceiling of my bedroom, as had the young Bobby Fischer, later to be the second American world champion.

The appearance of the pieces and board appealed to me. The beauty of chess is its very starkness: six kinds of pieces, all elementary in design, interacting on an unadorned board. The pieces cry out for the player to make sense of them, but in their austerity they offer little help. Operating largely on his own, the player infuses each piece with a personality and a history, much like the patient in analysis who reads all sorts of things into the stoicism of the analyst.

Chess also appealed to me because, unlike most games, it does not encourage hypocrisy. When your croquet ball mysteriously veers to one side, you can always look for pebbles in the grass. But when your Bishop is deflected, you cannot search for imperfections in the playing surface. In chess everything is out in the open. (I now admit that my views then were those of a naive purist. There is rationalization in chess, of course, as there is in every human endeavor. The loss of a chess game has been so often attributed to illness that more than one master has quipped that he never defeated a healthy opponent.)

There's also no way to disown the damage that you and your opponent deliberately do to each other. You cannot apologize when your Bishop skewers his Queen, and he offers no excuses when his pieces descend like hungry vultures on your King. And when you announce "Checkmate!" any effort to sound soft and sweet falls on deaf ears. He still detects malice and self-satisfied smugness in your voice—and most of the time it's not his imagination.

In the two weeks it took my body to purge itself of yellow jacket toxins, I beat my father more often than he beat me. A year later he would never win another game from me. Throughout elementary school I played my classmates as often as the teachers permitted, and I cannot recall losing a game. In about fifth grade I came across my first chess book, which would shape the course of my life for the next three years. I cannot exaggerate my excitement at discovering that chess games between topflight players were recorded in special notations, preserving them for posterity. I was astounded that the book analyzed games played more than 130 years ago, and that, after all that time, chess authorities did not agree on which player stood better in certain thorny positions. There was something very satisfying about setting up the disputed positions on my own chessboard and reaching my own conclusions about how, say, Lionel Kieseritzky could have repelled Adolf Anderssen's mating attack in London in 1851. Moreover, I was tickled that I could record the moves of my own games with the same notation the grandmasters used.

The fact that tournament games are recorded and analyzed inconclusively for years to come makes chess more of an art form than a sport. When a grandmaster plays a game, he is doing much more than engaging in a cerebral battle with a human opponent. He is contributing to the evolution of chess technique.

From that first chess book I learned that there are favored sequences of

Paul Hoffman began playing chess at age 5. He wrote about the fear of the number 13 in the February issue.

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opening moves with names like Max Lange Attack, Bird's Opening, King's Gambit Declined, Albin Counter Gambit, Nimzo-Indian Defense and Fried Liver Attack. Before I knew enough about chess to have an opinion of the merit of each opening, I studied the ones whose names I liked. I hated the taste of fried liver, but I thought it was a swell name for an attack, and so I played it as often as I could.

When I was about 13, I was rooting around under my seat on the Penn Central Railroad and happened on a dog-eared copy of *Chess Life and Review*, a glossy magazine published by the United States Chess Federation (and now called *Chess Life*). At the end of the magazine was a list of upcoming tournaments. I was delighted to see that a tournament for beginners was scheduled that weekend at the Hotel McAlpin on 34th Street in Manhattan. I entered and ended up winning four games, drawing two and losing none, a performance that netted me a prize of $25 worth of chess books.

A young woman at the tournament,

Forcing the grandmaster to stop and ponder is the dream of every amateur.

whom I defeated with a flashy mating attack, told me that the Danish grandmaster Bent Larsen, who was one of the top ten players in the world, was going to give a simultaneous exhibition in New Haven. In a "simul," a grandmaster plays several games at once against all comers. (The record, set in Buenos Aires in 1940, is 400 simultaneous games, played by the Swedish grandmaster Gideon Ståhlberg over a period of 36 hours. He lost only 22, winning 364 and drawing 14.)

In a simultaneous exhibition, the grandmaster walks swiftly from board to board, barely breaking stride to make a move on each one after, at most, a moment's reflection, continuing around the room until all the games are over. During the first few trips around, the grandmaster sizes up his opponents. Usually, most of the players are conspicuously bad and he puts their games out of his mind because he can mechanically finish them off. A few players, however, may put up an inspired defense or launch a tricky attack. These games the grandmaster commits to memory so that, as he glides around the room, he can mentally mull them over and come up with a good plan. By analyzing the difficult positions in his head while he mindlessly plays out the easy ones, he is able to continue making moves at a brisk pace, thereby maintaining the illusion of total mastery.

The simultaneous exhibition generally taxes the grandmaster's feet more than his mind. Few amateurs will draw a game against him, let alone beat him. But there is more than one way for the amateur to emerge victorious. All he need do, although even this is not easy to pull off, is to make a move that forces the grandmaster to literally stop and think. It is at that rare moment when the grandmaster breaks stride to study a position that the amateur is admitted to the brotherhood of chess players. That is a dangerous moment, for it is often the point of no return. Carried away by his small triumph,

When he lost to the Prince of France, William the Conqueror put board to pate.

the amateur may decide that he has within himself the stuff of champions. No matter how slow his subsequent progress at chess may be—indeed, even if there's no progress at all—he will never be free of the gnawing thought that he, too, could be a grandmaster if only he applied himself.

Most grandmasters take the White pieces (which move first) in every game in a simultaneous exhibition. Bent Larsen, I had heard, was an exception, generously playing Black in half the games. With the exhibition in New Haven a month away, I decided to study every published game of Larsen's I could find in which he played Black. I figured that if I had White against him, I might be able to steer the game, by virtue of having the advantage of the first move, into positions that he had previously reached and, consequently, for which I was well prepared. It never crossed my mind that he, too, would be well prepared to play any position he had reached before and allowed again to be reached. That month I pored over some 150 of his games, to the ex-

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clusion of doing most everything else.

On the day of the exhibition I sat down at the board behind the White pieces, joining 49 other chess addicts who had each put up $7.50 to take on the great Dane. Larsen had a reputation for soft-spokenness, and aside from a "thank you" in response to someone's warm welcome, Larsen said nothing as he walked briskly around the room and made his first move on each board. For him we were all one faceless enemy.

In his first seven trips around—350 moves he had made in all—no one had succeeded in forcing him to break stride. I was delighted, however, by the way my game was progressing. As I recall, Larsen and I had duplicated move for move a From's Gambit he had played against Sture Nyman, a little-known Swedish master. The master had played passively and was mercilessly assaulted. The master's trouble, I believed, began with his ninth move, which put him on the defensive, from which he never recovered. I had come up with an improvement that I planned to unveil if Larsen made the same eighth move. And there was no reason he wouldn't, since it had served him so well before.

I could barely keep my eyes on the board as Larsen came around to make his eighth move. His hand shot out, grabbed a Pawn, picked it up, moved it forward one square and set it firmly down, his fingers lingering for a fraction of a second as they screwed the Pawn into the board. Sure enough, he had fallen into my little trap. I would punish him, the lazy fool, for mechanically making moves he had made before. I confidently studied the position, confirming for the umpteenth time the soundness of my plan. As I extended my hand to make the move I had carefully prepared, my fingers went numb, as if they had been shot full of Novocain. I feared that my hand was no longer under my control and that in spite of the sharp image of the correct move in my mind's eye, my fingers might not cooperate and would select some other move that would expose me as an imbecile. But in the end I made the move I'd intended, and I waited patiently for Larsen to return.

Aron Nimzovich once begged the Lord to explain why he had lost to an idiot.

Larsen arrived and, just as I hoped, he broke stride. He studied the position for what was probably six seconds but seemed like several minutes and then looked up at me, smiling. "That's a better move than the move Nyman made," Larsen said, "but no matter." The smile disappeared and his voice became grim. "I shall crush you anyway like I crushed him!" And, sad to say, he proceeded to do just that.

The idea of crushing an opponent, I later discovered, is part of the mindset of every strong player. Aggression is the name of the game. Fischer often spoke of the pleasure it gave him "crushing the opponent's ego," and when he was alone in a hotel room, psyching himself up for a tournament game, people in the hall would hear him shout comic-book words—Slam! Bam! Zowie!—as he banged pieces down on a board.

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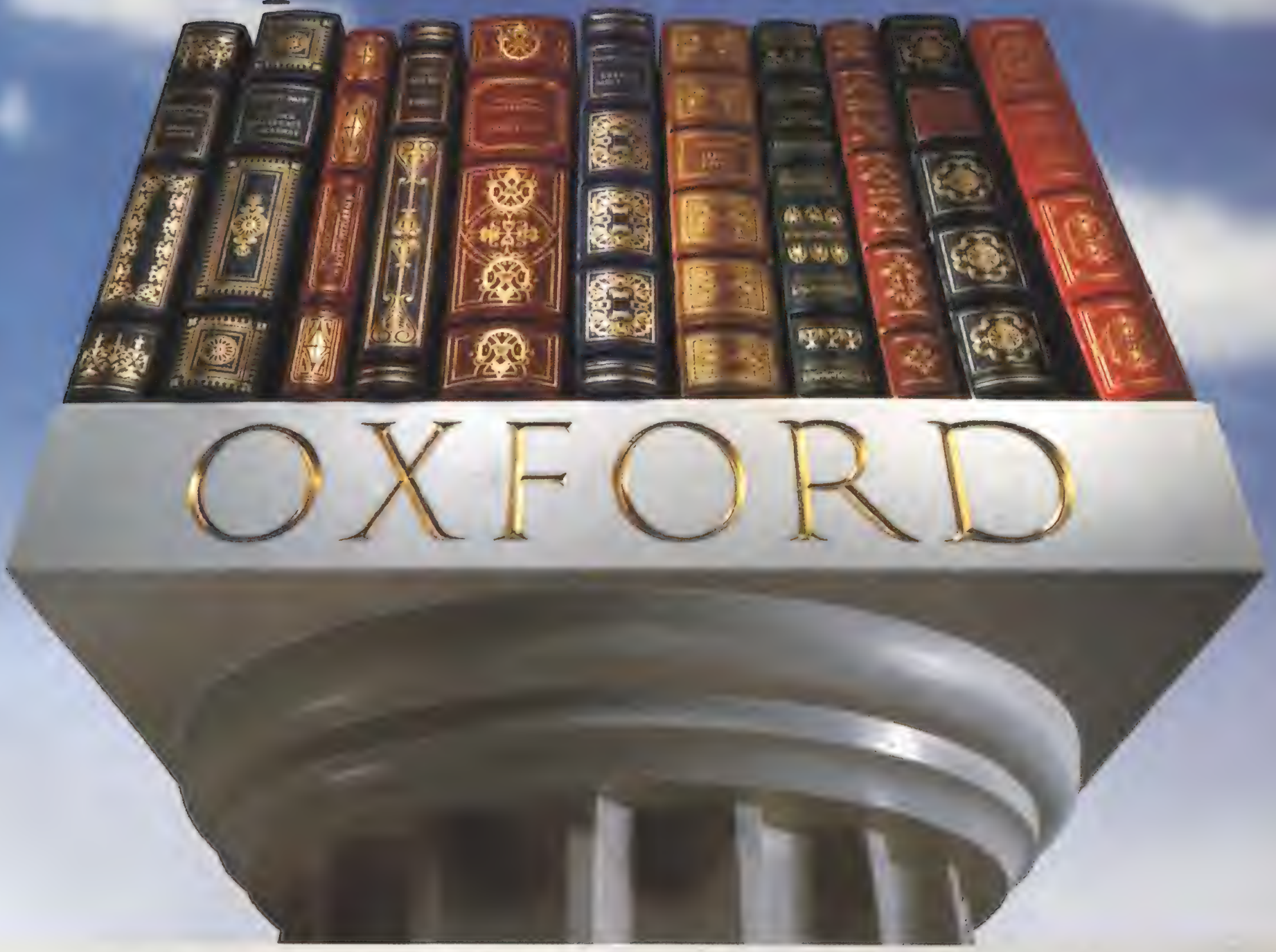

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Defeat, I found, is never pleasant, and each player has his own way of coping with it. William the Conqueror, after losing a game, smashed a chessboard over the head of the Prince of France. And the great Aron Nimzovich, after losing a match, got up on the chess table, dropped to his knees, extended his hands toward the heavens and shouted, "Oh Lord, why did I have to lose to this idiot?"

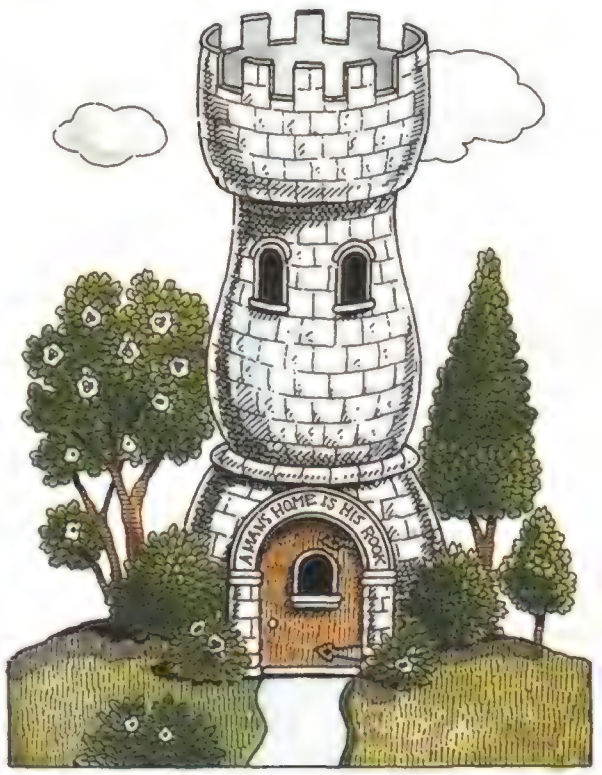
My way of facing defeat was to chastise myself. No good player ever really admits to himself that he lost a game because of his opponent's brilliance. To be sure, he may effusively congratulate his opponent on the farsightedness of his mating combination the likes of which have not been seen since Anderssen defeated Jean Dufresne at Berlin in 1852. But the postgame kudos belie the cruel fact that even a truly ingenious tactical strike, to which there is no adequate response, could not have been launched if the loser had played differently at an earlier point. This knowledge looms large in the loser's mind. He cannot be at peace with himself until he discovers where he went astray. To this end, he plays through the game again and again in his head, mulling over alternative move sequences.

For two years after my loss to Larsen I played regularly in tournaments at the McAlpin, the Hotel Roosevelt near Grand Central Terminal and the Skyline Motor Inn in the heart of the rough neighborhood known as Hell's Kitchen. I bought a couple of hundred chess books, which I studied religiously. I subscribed to two British chess journals. I bought back issues of the leading Soviet chess periodical and, to help me to follow them, a booklet entitled *A Chessplayer's Guide to Russian*. I took lessons in the opening from an Israeli champion and in the endgame (the final phase in which only a few chessmen remain) from an American master who had analyzed the Fischer-Spassky match on public television.

The work paid off. My ranking in the chess world climbed, but still I was not satisfied. The more I understood the game, the more I saw there was that I still needed to understand. Chess is like the proverbial well that never runs dry, only in chess the well not only refills but also enlarges. I know of no other endeavor in which the possibility of progress is this dismal. Nothing was more discouraging than the realization that although my field of vision in chess was growing rapidly, the landscape was growing even faster.

My obsession with chess was fortunately confined to the game itself. Unlike Luzhin, the morose grandmaster who commits "sui-mate" (suicide) in Vladimir Nabokov's novel *The Defense*, I did not fantasize "that with a Knight's move of this lime tree . . . one could take that telegraph pole." And, unlike my hero Fischer, I did not plan to use any money I might win in tournaments in order to hire the "best architect" and have him build me a house in the shape of a Rook. "Yeah, that's for me," Fischer once said. "Class. Spiral staircases, parapets, everything. I want to live the rest of my life in a house built exactly like a Rook."

From the moment I came home



American chess champion Bobby Fischer wanted a house built just like a Rook.

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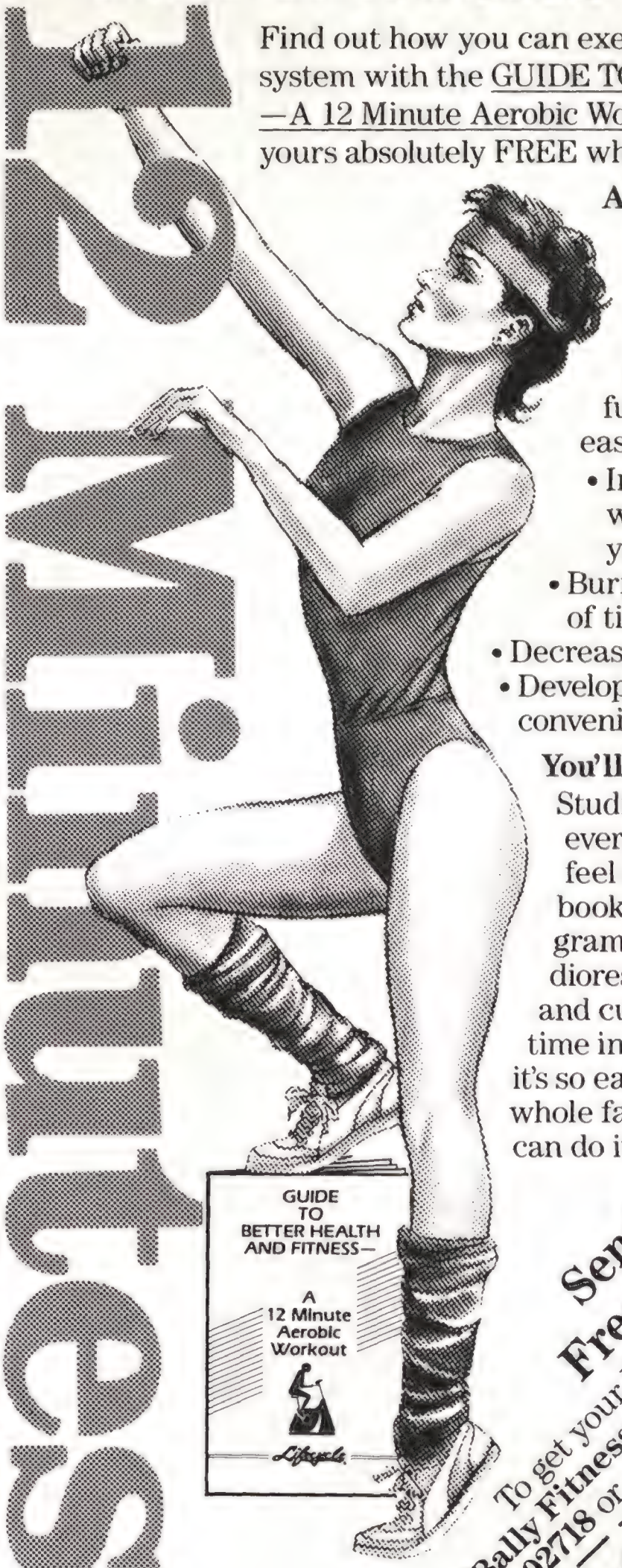

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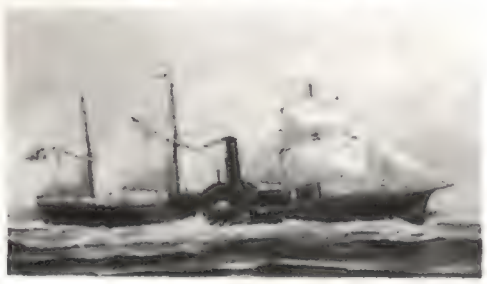

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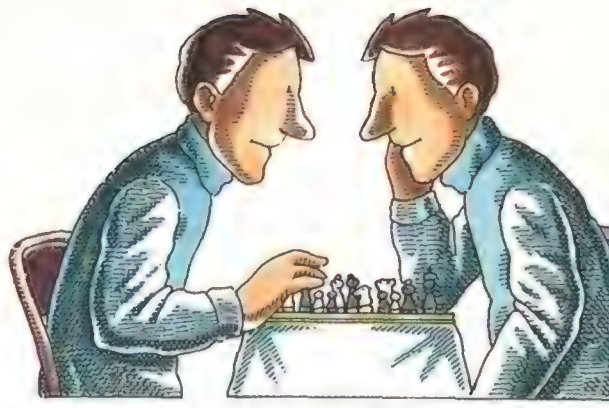
from school to the time I went to bed, I was crouched over a chessboard, studying popular sequences of opening moves, searching for new lines of play I could spring on unwary opponents. But it was one thing to come up with opening innovations and novel strategies in the solitary comfort of my own bedroom, and quite another thing to use these discoveries against flesh-and-blood opponents who savored winning as much as I did and were equally obsessive in their pregame preparation.

Nights between tournament games I did not sleep well. I dreamed about chess—and the chain of mental events was always the same. First I'd see a chessboard in my mind's eye, the pieces perfectly centered on their original squares (for some reason, I'd always picture the Knights as facing right). Then I'd concentrate at length on this familiar, initial setup, trying to make sense of the beauty—and the horror—of the game that enslaved me.

When I was finished pondering the initial position, I'd see the mental chessmen slide gracefully across the board as they repeated move for move an entire game from out of my past or from the annals of chess history—often a game I didn't realize I had committed to memory. At other times the game would be a product of my imagination. The first game would be followed by another, then another and so on through the night.

The pace of the games would gradually pick up, reaching a frenzied crescendo at daybreak. This experience made me more receptive to the newspaper accounts that linked Morphy's death to the strain of blindfold chess. When the mental film festival had ended and it came time to get out of bed, I was hardly in peak form to play chess. There was no danger of my falling asleep over the board—I was too keyed up—but I would have to find good moves while battling a headache and ringing ears. Somehow I usually found them, but I didn't have much fun. Chess had become so



Playing chess with yourself, free of the clash of egos, can be fun and satisfying.

little fun for me that I gave it up when I went to college.

The main problem was that, despite my tournament successes, I was not happy with my play. Many of my games seemed marred by weak play or even outright blunders. The games that ran through my head seemed purer. Contrary to popular belief, it is possible, and even enjoyable, to play chess with yourself. On each move you take a fresh look at the board and follow what seems to be the objectively correct plan. In tournament play, however, the ego's will to win can interfere with your appraisal of the position. The self-imposed pressure to win can be so intense that it brings the intellectual faculties to a standstill, like the effect of car headlights on a deer.

Perhaps I shouldn't have been so hard on myself. After all, even the world's strongest players make mistakes. The 21-game match between Fischer and Spassky was heralded as the "match of the century," but in reality it was a comedy of errors, starting with the very first game. In a deadly dull position, Fischer committed one of the worst blunders of his career, a move so egregiously bad that even rank beginners were shaking their heads.

The knowledge that even the best players foul up did not make me more tolerant of my own lapses. Instead, it made me feel that something was rotten at the heart of the game. Even if the possibilities in chess seem to be boundless, it is a mathematically fi-

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nite activity—there are, for example, a few hundred billion positions that can be reached after four moves for White and four for Black. In any given position one move is undoubtedly best, although we as a species apparently lack the mental resources (as well as the computer resources) to determine definitively what move that is. But that's not what's rotten with chess. Indeed, that's the strength of the game. If we always knew with certainty what the best move was, there'd be no point in playing.

In the absence of being able to calculate the best move, you develop plans and strategies and play accordingly. That's the fun of the game. Every master agrees, for example, that it's important to control the central squares, but how to do this is a matter of debate. Some masters think it's best to immediately occupy the central squares with Pawns. Others believe it's best to hold back the Pawns and bring more powerful pieces to bear on those squares. The beauty of chess is that you can have a considered opinion about which plan is best and stand behind that opinion by trying the plan in actual games.

The bad thing about chess is that in the middle of a game, after successfully executing a plan, you may suddenly blunder. When you play chess in your head, however, you can take back a move and follow through with your plan. That's why I found mental chess to be more rewarding than tournament play. Nonetheless, the strain on the mind is a high price to pay, perhaps too high, as Paul Morphy might attest.

Insanity, I should add, may be something to avoid, but it is not incompatible with strong chess. From 1883 to 1885, Cambridge University played a game by mail against the Bedlam Insane Asylum. You can guess who won.

On nights before tournaments, the author dreamed his way through chess matches, playing faster and faster, until he awoke exhausted.

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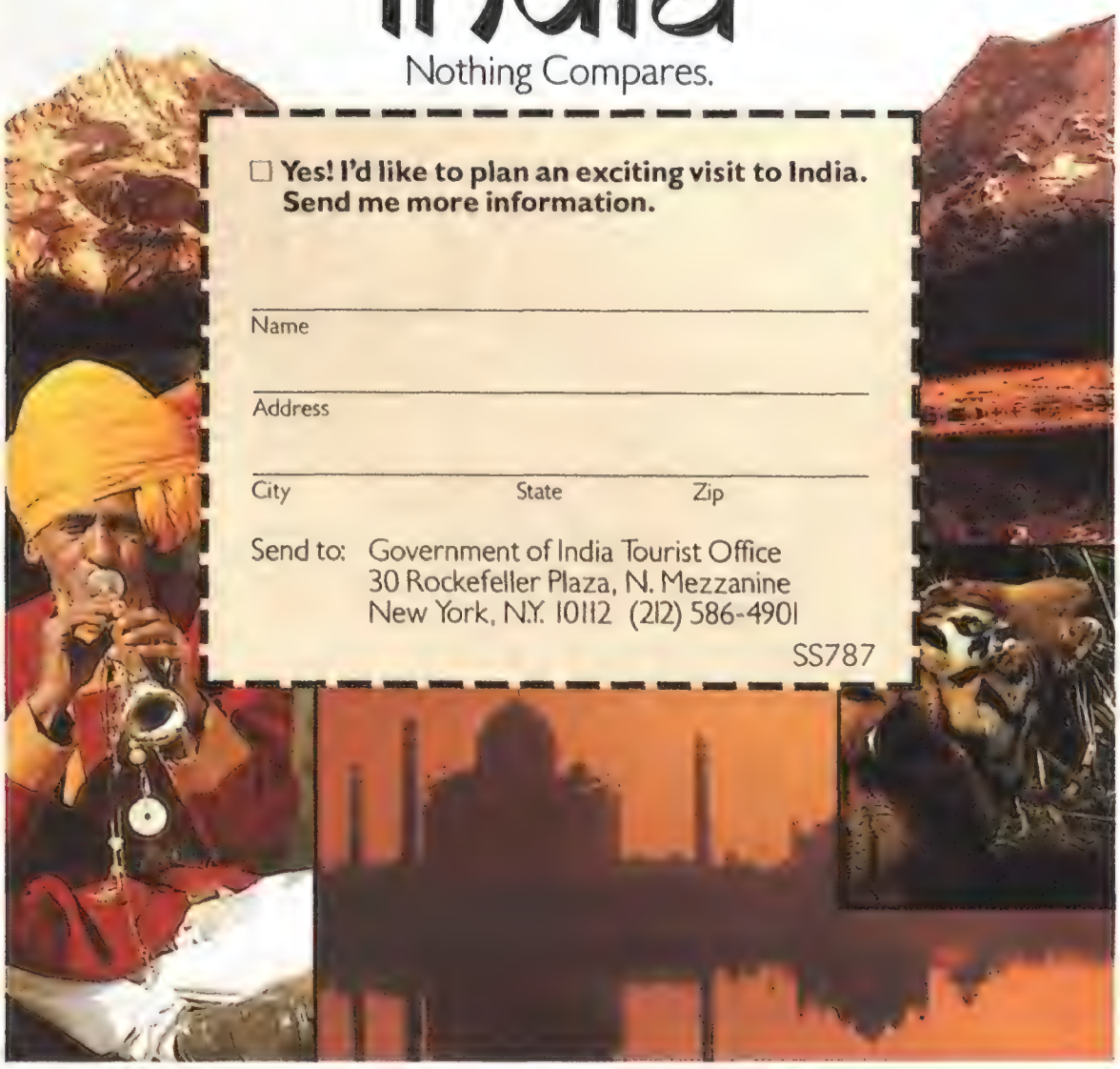

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Book reviews

Iron & Silk
Mark Salzman
Random House, $16.95

When Richard Nixon reopened the doors to China early in his Presidency, one American journalist described it as but another chapter in this country's long-standing love affair with the Chinese people.

It was true then, it is true now, and nowhere is this curious attachment more evident than on the pages of Mark Salzman's lively, intimate account of his two-year stint as a teacher of English in south central China.

Salzman's personal love affair with things Chinese began at age 13 and was supported by his parents, who bought him books on Chinese art and enrolled him in a local kung fu school. He practiced his kung fu several hours a day, trying to overcome pain by walking to school barefoot in the snow and by letting his instructor pound him senseless so that he might learn to "die well."

Salzman survived, his fascination held, he majored in Chinese language and literature at Yale and was assigned upon graduation in 1982 to teach English at Hunan Medical College in the city of Changsha. His classroom was located on the second floor of a three-story campus building, the first floor of which housed cadavers for the Anatomy Department while the third floor was occupied by Political and Moral Education. Salzman's students joked that it was hard to tell who slept more soundly in that building, the bodies on the first floor or the students on the third.

It's important to stress that Salzman's book is not a study of government and politics, nor is it the customary scan of

moon-faced hordes in cotton pants and padded jackets that the TV cameras love to show. Salzman's subjects have become his friends, colorful individuals with names to match—Fatty Du, Old Sheep, Pan, Old Ding and Little Guo.

Through a series of vignettes we meet these people "up close and personal." We witness their constant, self-effacing politeness, we see their innate curiosity, we feel their insatiable hunger to learn, especially things American. Salzman has several dozen students, including doctors, interns and a select group called the "Middle-Aged English Teachers." They call him Teacher Mark and he doesn't disappoint them. Nor does he bore them. His first session in the Western Culture Lecture Series is an animated, table-jumping review of the popular movie *E.T., the Extra Terrestrial.*

Teacher Mark's adventures turn out to be less on the giving end than on the receiving. Setting up naive foreigners seems to be a popular sport in China, and our young American is no exception. He is introduced to a famed martial arts master as being "strong as a lion and fast as a swooping pigeon." Some pigeon! Before his training ends (he swaps English lessons for instruction), Teacher Mark manages to knock himself down with a bamboo staff and to pierce his thigh with a 36-inch-long sword.

It is a fascinating life, this teach-and-learn. Salzman practices *taiji* (one of the dozens of Chinese martial arts) in an old village house whose wood ceiling is stained black from the accumulated smoke of incense and coal. He sails on a moon-flooded river and plays Bach's First Suite for Unaccompanied Cello for a family of boat people who have never seen an American, nor a cello for that matter, but who beg him to stay and live with them forever.

To accompany this mutual trust and affection, there is humor. Salzman recounts the practical reaction of the Chinese to the interminable speeches given them by visiting political cadres. In the third hour of a "brief review of current political, economic and social issues affecting the province," Salzman complains to his Chinese companion that the speech is unbearably boring. "That is because you are listening," yawns the man, and goes back to sleep.

This is a warm, satisfying story, and a funny one. How long has it been since you laughed aloud over a book? Perhaps even slapped a thigh? Here's a chance to do it again. Take it!

William Dieter
Denver novelist

The Melody Lingers On: The Great Songwriters and Their Movie Musicals
Roy Hemming
Newmarket Press, $29.95

American Musical Theatre: A Chronicle
Gerald Bordman
Oxford University Press, $19.95 (paper)

The American musical comedy is an endangered species. It has been driven out of its Broadway habitat by rising costs, which make mounting a production risky and buying tickets for one painful; by shrinkage in the range of music people want to listen to; and, perhaps, by the exhaustion of its possibilities. The musical's demise may be no tragedy: even its staunchest supporters concede that diversion is the genre's loftiest purpose. Yet the empty theatrical niche—

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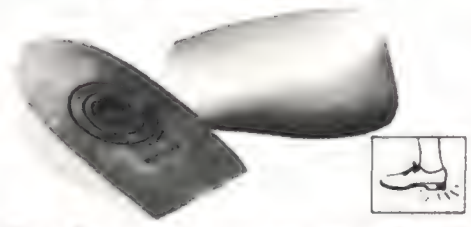

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Judy Garland's dance for 1950 film *Summer Stock* typifies musicals' elegance.

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In the meantime, as occasional hits like *La Cage aux Folles* and the new film version of *Little Shop of Horrors* hold out some promise of revitalization, we have two boffo books, as well as a growing supply of videocassettes, to remember musicals by. Indeed, Roy Hemming's *The Melody Lingers On* could serve as a shopping guide for movie musicals on tape. The book focuses on 16 composers whose melodies enlivened movie musicals and lists hundreds of films with their directors, stars and songs. The tunesmiths range from the renowned (Gershwin, Berlin, Porter) to the little known (Nacio Herb Brown, composer of "Singin' in the Rain"; Harry Warren, who provided Carmen Miranda with some of her best material).

Hemming, who produces the New York Philharmonic's radio broadcasts, always credits lyricists but gives primacy to the melody makers. He acknowledges, however, that "Oscar Hammerstein II's wife, Dorothy, had a point when she . . . [insisted] that 'Jerome Kern wrote *da-*

da-dada. It was my husband who wrote "Ol' Man River"!' "

Hemming strikes a balance in a passage on the song that became Bob Hope's theme, "Thanks for the Memory," which composer Ralph Rainger and lyricist Leo Robin wrote for Hope and Shirley Ross in *The Big Broadcast of 1938.* This is Hemming's paean to a song that remains familiar, if only as a few wordless bars announcing the arrival onstage of an American institution. "People who know the song only as Hope's theme rarely fail to be surprised—and moved—when they first see *The Big Broadcast of 1938* on TV or in a movie revival house and hear how marvelously the original duet version holds up, and how touching both Hope and Ross are in the sequence. The song is not just 'a piece of material,' as Robin first feared, but a genuine 'pop aria' that manages to tell more about two characters' feelings for each other than any lines of dialogue could in the same three or four minutes. Few songs written for any movie over the past fifty years can equal it in that respect."

Elsewhere Hemming displays the racy phrasemaking of a '30s lyricist, as when he remarks that *She Done Him Wrong,* starring Mae West and Cary Grant, "made history on two fronts (besides West's own)." *The Melody Lingers On* is a buoyant book, a crystallization in print of the frothy elegance that characterizes musicals at their best.

American Musical Theatre is an updated version of Gerald Bordman's monumental reference book, first published in 1978. His method of attack is simple. The book progresses from season to season and play to play, with frequent pauses for brief biographies of major figures—Florenz Ziegfeld, Ethel Merman, Stephen Sondheim and legions more—and infrequent ones for elaboration of patterns, such as "Broadway's Response to the Swing Era."

Bordman's eye for vivid detail lends interest to his notices of even the obscurest productions. One such is *The Roof Scrambler* of 1839, an odd title that ripens into a corker when one learns it was a parody of Bellini's *La Sonnambula* (The Sleepwalker). An enterprising composer-lyricist could write a zany song, if not an entire madcap comedy, out of a contretemps, such as the one between Ziegfeld and the SPCA that Bordman describes. The young impresario was staging a show called *The Dancing Ducks of Denmark.* The Society forced it off the boards when it discovered he "induced the ducks to dance by heating the bottoms of their feet."

Only occasionally does Bordman's knack for encapsulation fail him, as when he traces the vogue for the term "minstrel" to the Tyrolese Minstrel Family, which toured the United States in the early 1840s, without adding that in its modern meaning the word goes back at least to the 16th century.

If Bordman sounds a bit grumpy by the time he reaches the present ("The 1984-85 season," he writes, "may well go down in history as Broadway's worst"), it is hard to blame him. Extinction of the musical comedy would spell a diminution in cleverness and style, not to mention lilt, of American popular entertainment. Fortunately, they can still be found in cabaret performances, in dinner-theater revivals and on cassette.

Dennis Drabelle
Washington writer and reviewer

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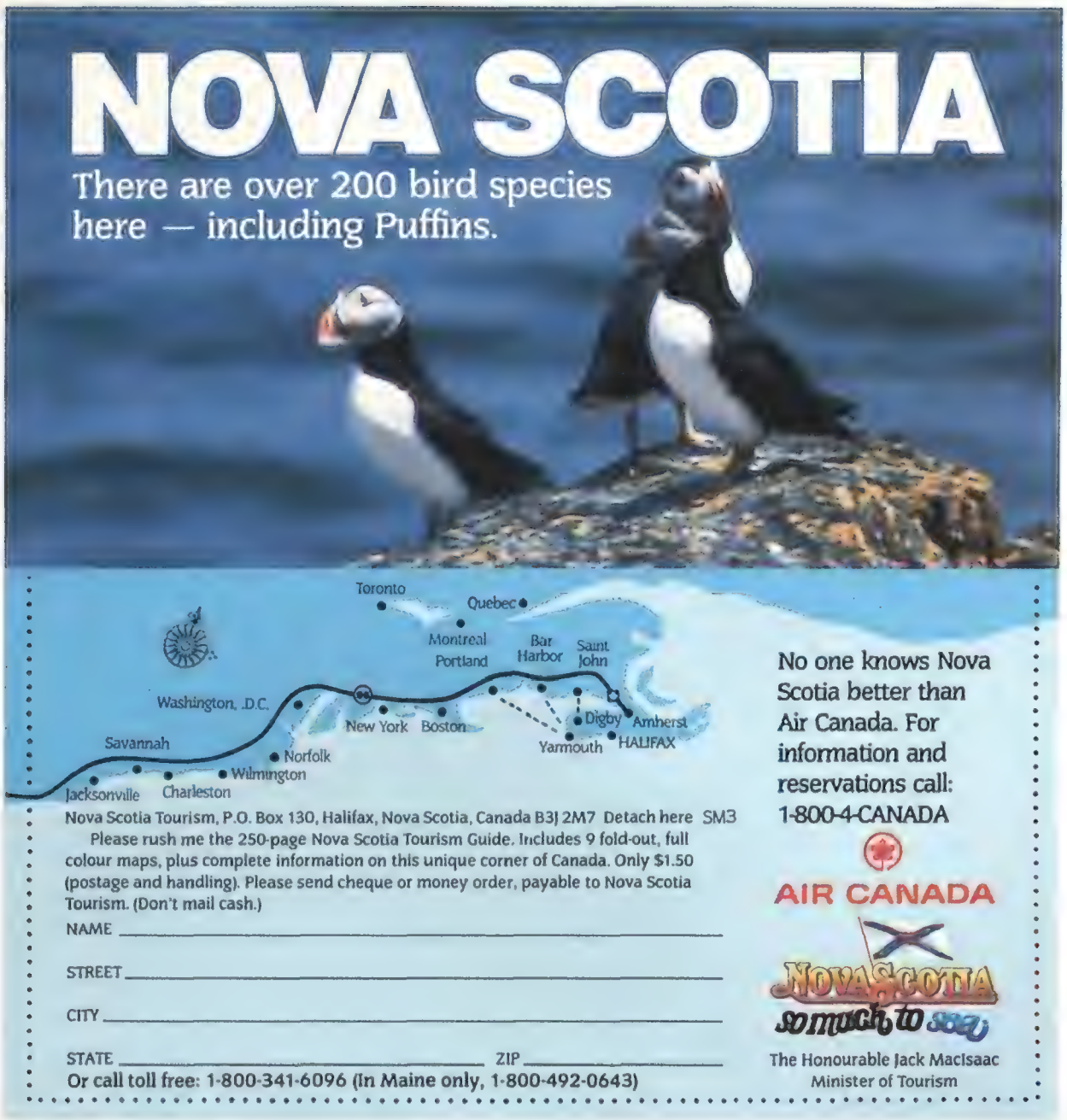
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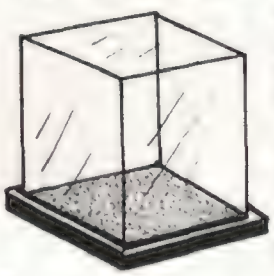

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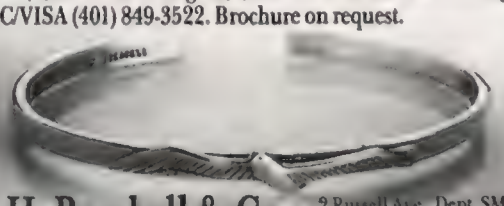

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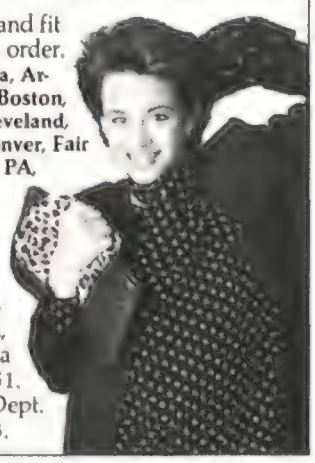

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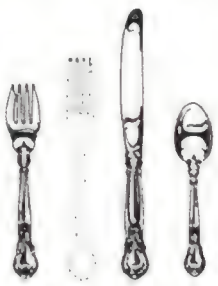

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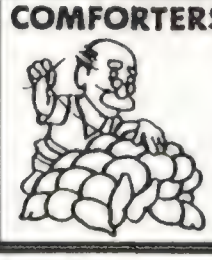

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Smithsonian highlights

Planning a Smithsonian visit?

The Associates' Planning Packet, brimming with helpful information, is yours for the asking; call or send postcard to Associates' Reception Center, Smithsonian, Washington, D.C. 20560; (202) 357-2700 or TDD for hearing impaired (202) 357-1729. Begin your visit at the Associates' Reception Desk in the Castle.

Festival of American Folklife

This year's celebration will continue July 1-5, highlighting the tradition of Michigan; our multilingual heritage; and musicians from Washington, D.C.—all on the National Mall between 12th and 14th Streets. For more information, call the Smithsonian Information Center at (202) 357-2700.

Special July exhibits and events

National Museum of American History
Official Images: New Deal Photography (July 1-January 1988) See *Highlights continued.*

Anacostia Museum
Contemporary Visual Expressions (through July 31) Works by Sam Gilliam, Martha Jackson-Jarvis, Keith Morrison and William T. Williams.

National Portrait Gallery
Portraits from the American Academy and Institute of Arts and Letters (through September 20) Paintings by William Merritt Chase, Augustus Saint-Gaudens, others.

National Museum of American Art
John La Farge (July 10-October 12) Paintings, graphics and stained glass by the versatile 19th-century master (see page 46).

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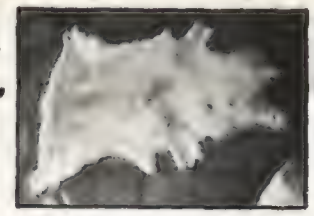

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Cooper-Hewitt Museum (New York)
Art Nouveau Bing: Paris Style 1900 (July 21-October 11) Prints, posters, decorative objects and furniture.
Safe and Secure: Keys and Locks (June 9-October 18) Spanning 2,000 years.

Hirshhorn Museum & Sculpture Garden
Morris Louis (through July 26) Fifty paintings including "Veils," "Florals," "Unfurleds" and "Stripes" series.

National Museum of Natural History
Ebla to Damascus (July 10-January 1988) First major display of archaeological material from Syria in the United States.
Dinosaurs, Mammoths, and Cavemen, The Art of Charles R. Knight (through August 31) Works by the great depicter of dinosaurs and prehistoric environments.
Dinosaurs Past and Present (through August 31) Comprehensive collection of paintings, sculptures and models.
Dinosaurs (July 17, noon, Baird Auditorium) Film with lifelike animation narrated by Christopher Reeve.

National Air and Space Museum
Into the Sunlit Splendor (through December 31) Forty paintings by aviation artist William S. Phillips.

Renwick Gallery
Dan Dailey: Glass, 1972-1987 (through October 25) Vases, sculptures, drawings.
American Art Deco (through July 26) Includes 180 works in various media.

Exhibition catalogs

Catalogs available at this time include:
Dinosaurs, Mammoths, and Cavemen (paper, $14.95)
Dan Dailey: Simple Complexities in Drawings and Glass 1972-1987 (paper, $25)
Ebla to Damascus (paper, $27.50)
John La Farge (paper, $24.95)
Morris Louis (cloth, $40; paper, $18.95)

To order, send check or money order to Museum Shops, Box 44083, Washington, D.C. 20026-0083. Include 15 percent of total purchase to cover postage and handling (minimum, $1.75).

Lecture and Seminar Program

Oakland and Berkeley, California, will host the Lecture and Seminar Program, July 7-15. The series will feature lectures on aviation, American art and geology, a workshop on fossil identification and two performances of Afro-American songs. For further information, write to

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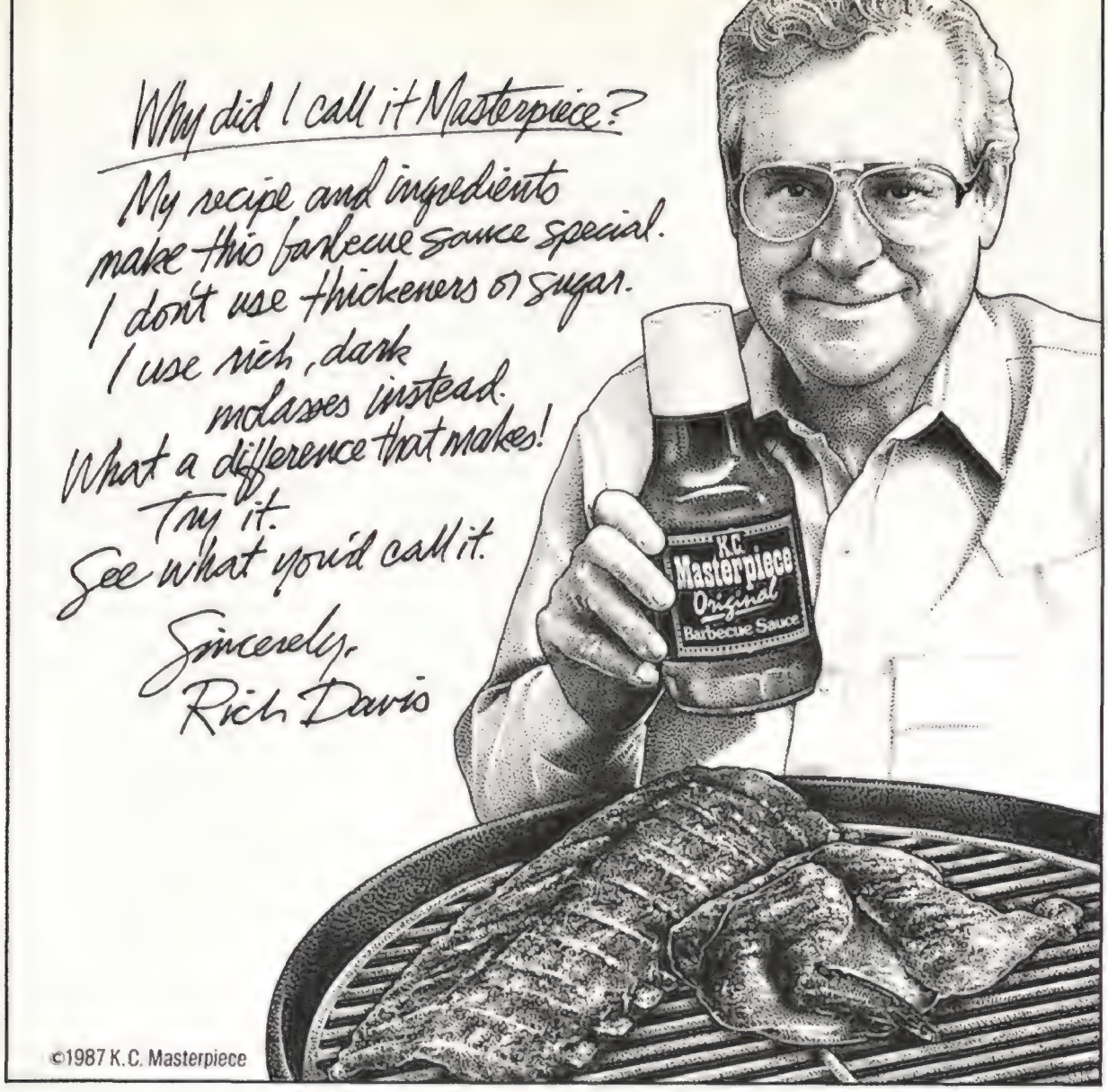

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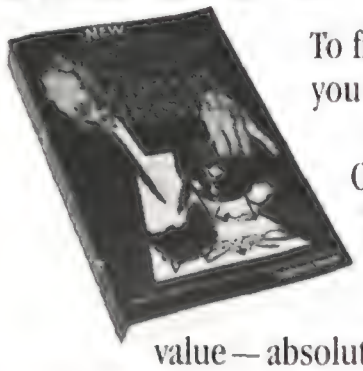

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the Lecture and Seminar Program, 1100 Jefferson Drive, Washington, D.C. 20560, or call (202) 357-1350.

Smithsonian on the air

Radio Smithsonian: Features include a visit to the new Enid A. Haupt Garden (see page 120) and a tour of the National Zoo's recently installed exhibition of invertebrates.
Here at the Smithsonian: Short TV features look at artist Raphael Soyer, and bridges.
The Movie Palaces: Half-hour production premieres on public television, July 15.
In Open Air: The American Impressionists: Re-broadcast on public television, July 3.
Smithsonian World: "Islam," July 22, 9 P.M., PBS channels.

To find out what stations in your area carry these programs, write Office of Telecommunications, MAH Room BB40, Washington, D.C. 20560.

Resident Associate Program

To become a Resident Associate, or for fee and ticket information, call 357-3030. Here are some July events:
Archibald Cox on the U.S. Constitution (July 30; 8 P.M.) Lecture by America's foremost professor of Constitutional law.
The Magnificent Bolshoi Ballet (July 23; 8 P.M.) *New York Times* dance critic Anna Kisselgoff describes the company.
Club 47 at the Smithsonian: Three Separate Evenings with Taj Mahal, Doc Watson and Mary Travers (July 22, September 2, November 4; 7 P.M.) Concerts re-creating the '60s mood and music of the Harvard Square club.

Smithsonian Institution Traveling Exhibition Service

SITES circulates exhibitions to hundreds of cities outside the Washington area. To sponsor one of the shows in your community, write SITES, Smithsonian, Washington, D.C. 20560.
Here are some July exhibits:
Chicago (July 22-September 7) *Spectacular Vernacular: Traditional Desert Architecture from West Africa and Southwest Asia*, Field Museum.
Colorado Springs (July 11-August 9) *Black Wings: The American Black in Aviation*, Pioneers' Museum.
Oakland (July 25-September 6) *Homage to Amanda: Two Hundred Years of American Quilts from the Collection of Edwin Binney, 3rd, and Gail Binney-Winslow*, Oakland Museum.

Highlights continued

Images from the New Deal

There they were—curators and historians up to their elbows in old photographs, sifting through heaps of government archives. The result of their efforts is a new exhibit at the Museum of American History, "Official Images: New Deal Photography." It reveals the 1930s through the eyes of men and women, many of them unsung, their work until now unseen, who crisscrossed FDR's America on assignment for five federal agencies.

The show enters largely unexplored terrain: the fields and roadways, neighborhoods and work camps that lay beyond the range of Farm Security Administration photographers whose work has long since come to epitomize the era.

Dorothea Lange's Dust Bowl migrants and other FSA pictures appear as a kind of touchstone, but alongside them exists a wealth of unexpected images: a prosperous gentleman farmer, seamstresses in a coat factory, copper miners on strike and, as harbinger of Rosie the Riveter, a young woman in welder's garb. This is a world on the brink of change, a culture soon to give way to the forces of industrialization and war.

A book, *Official Images: New Deal Photography*, written by curators Pete Daniel, Merry A. Foresta, Maren Stange and Sally Stein, and published by the Smithsonian Institution Press, accompanies the show, which runs through January 1988. *Kathleen M. Burke*

Works Progress Administration photographers documented lives of New York slum children for series on urban conditions.

A newspaper reporter interviews Montana farmer in his oat field, summer 1939, in Department of Agriculture photograph.

In Mississippi, woman demonstrating art of canning seems untouched by Depression.

Displaced Oklahoma farmer, the leader of a California cotton strike, was caught on film by Dorothea Lange.

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Domestic Study Tours

Pacific Northwest August 4-15: A new cultural tour of Seattle, Vancouver and Victoria for art and history enthusiasts.

Middle Fork August 7-15: Experience the thrill of white-water rafting on Idaho's famed Salmon River. Relax by campfires under starlit skies.

Lewis & Clark Trail August 8-15: Enjoy Idaho's spectacular wilderness scenery as you follow portions of the overland 1805 trail by horse and vehicle.

Alaska's Inside Passage August 18-25: This exclusive cruise for only 78 Associates visits remote and scenic places inaccessible to larger ships.

Colorado Mining and Railroad History August 20-29: Relive the golden age of trains by crossing the Rockies in your own elegantly restored private car; discover the romance of the Old West in Ouray, Durango and Cripple Creek.

Maine September 19-28: Rocky coasts, pine forests, mountain vistas await you on this invigorating hiking tour for all ages.

Philadelphia October 1-4: Lectures and tours focus on 18th-century Philadelphia and the making of the U.S. Constitution.

California Wine October 3-9: Learn to select, enjoy and evaluate wines for all occasions. Visit wineries in Napa, Sonoma and Mendocino with wine experts.

California Delta Cruise October 9-12: Cruise in the wake of the Gold Rush sternwheelers. Start from San Francisco to discover the Sacramento and San Joaquin rivers, rich in history and legend.

New York Architecture—From Cast-Iron to Post-Modern October 22-25: Enjoy a weekend of walking tours, a private cruise around Manhattan and Broadway's *Les Misérables.*

Florida Keys October 24-30: Return to camp as an adult at Seacamp on Big Pine Key; explore mangroves, tidepools and colorful coral reefs in small groups led by marine experts.

National Air and Space Weekend November 6-8: Explore air and space travel with curators and special guest astronaut. Program features private tours of the Museum and its restoration and storage facility at Silver Hill, Maryland.

Christmas at the Smithsonian December 4-6: Welcome the holidays with tours, music and festive dining at selected museums.

Everglades December 5-12: For the novice or expert, canoe and camp among Florida's Ten Thousand Islands.

Christmas in Santa Fe December 20-27: Experience the festive traditions of the Spanish and Indian cultures of the Southwest.

Foreign Study Tours

People's Republic of China Follow the Silk Road, climb sacred peaks, cruise the Yangtze, travel by train, study decoration and antiques or visit Tibet. Tours for new and repeat China travelers.

Iceland July 25-August 9: An adventure tour that circles this austere, beautiful land. Study unique geology, plants and birdlife.

Alpine Hike August 16-30: A challenge for adventurous hikers through the majestic mountains and valleys of Switzerland.

London and the English Countryside August 30-September 13: Design your own nine-day London program, then enjoy five extra days on a countryside excursion.

Oxford Smithsonian Seminar September 11-26: Be an Oxford scholar. Attend classes and field trips.

Canadian Rockies September 14-23: Mountains, hot springs and resorts beckon hikers to Banff, Jasper and Lake Louise.

Scandinavian Design: Past and Present September 20-October 4: Enjoy a wealth of artistic expression. See museums, galleries, design ateliers, artists' studios.

Irish Walk September 24-October 6: Stay in castles and take day hikes through the Ring of Kerry and Connemara.

In Pursuit of Brazil October 6-23: An enormous land of contrasts and exuberance to fascinate you. Includes Rio de Janeiro, Brasilia and Iguaçu Falls.

Highlights of Austrian Civilization October 10-25: Live in a baroque palace in Salzburg and a charming hotel in Vienna while studying music, art and history.

Japan Journey October 11-24: An excellent introduction to Japanese culture in Kyoto, Tokyo and the countryside.

Australia-New Zealand October 11-November 3: An intriguing introduction to natural history and culture down under.

Paris and the Rhône River October 12-25: Study art and history. Start in Paris, then cruise the Rhône River from Lyon to Provence, stopping in Avignon, Arles, Orange and Nîmes; finish in Cannes.

Christmas in Europe Celebrate with fellow Associates in one of four idyllic settings: Munich and Rothenburg; Salzburg and Vienna; Canterbury; or Winchester.

Christmas in Fiji December 17-29: Enjoy the holidays in a South Sea island setting. Reside at the intimate Namale Plantation overlooking the Pacific.

Backstage London January 1-10: In Europe's theater capital, attend traditional and avant-garde productions, meet performers backstage.

Thailand and Burma January 9-29: In Asia's most exotic countries, explore colorful cities, remote villages and archaeological sites.

South America Voyage January 22-February 16: Cruise from Brazil through the Strait of Magellan and Beagle Channel to Santiago, Chile.

Write Smithsonian National Associates, 1100 Jefferson Drive, SW, Washington, DC 20560 or call (202) 357-4700 for tour brochures

Washington

Smithsonian Seminars

Join your fellow Associates for a week of discovery and adventure at Smithsonian Seminars in Washington, D.C. and at other locations around the country. These specially arranged courses offer you the chance of a lifetime to take an active part in the Smithsonian's varied research activities.

Aircraft Restoration: A Closer Look
November 8-14

For aviation enthusiasts, there is nothing quite like it. In a score of buildings sprawled across 21 acres in Silver Hill, Maryland, the National Air and Space Museum's Paul E. Garber Facility contains more than 40,000 aviation artifacts, highlighted by a unique collection of aircraft which have been painstakingly restored by master craftsmen. Discover this remarkable facility during in-depth tours and workshops by skilled artisans who will aquaint you with the challenges of restoring vintage aircraft as diverse as the Vought OS2U-3 Kingfisher, the Spad XIII and the B-29, *Enola Gay.*

Intensive workshops and demonstrations will begin with the analysis of aircraft "remains." You will then learn the fine techniques of woodworking, fabric covering, doping, painting, corrosion control, metalwork and assembly. During private tours, you will see almost 200 finished aircraft as well as a superb collection of engines, armament and flight-related memorabilia.

Complementing your sessions at the Garber Facility are tours of the aviation galleries to see the historic aircraft at the Air and Space Museum. Celebrate the conclusion of this exhilarating week with a screening of the Museum's IMAX film, *On the Wing*. Hotel accommodations at the Capitol Holiday Inn are optional.

Coming Up: Seminars in Washington and Beyond Watch this column for information on seminars in 1988. Topics for Washington seminars will include American music, anthropology at the Smithsonian, Greek archaeology, nature printing and historic aircraft.

For Associates who wish to study with Smithsonian scholars outside of the Washington area, seminars will be held at the University of Southern Mississippi in Hattiesburg, Mohonk Mountain House at New Paltz, New York, and in Vail, Colorado.

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1232677.	German	1232800.	Spanish
1232685.	Greek	1232818.	Swahili
1232693.	Hebrew	1232826.	Swedish
1232701.	Hindi	1232834.	Tagalog (Filipino)
1232719.	Indonesian		
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By Joseph Kastner

It was a big day for 'Big Jule'—and me

I have become, for reasons I will explain in a moment, an authority on the figures and front-page news of Thursday, March 28, 1907. For instance:

James Henry Smith, who was also known as Silent Smith, a New York social climber. After inheriting $60 million from an uncle who expired while sitting in a chair at his London club, and then contracting a somewhat scandalous marriage, Smith died suddenly on his honeymoon, March 27. He and his bride were accompanied by the Duke of Manchester and his Duchess, the former Miss Zimmerman of Cincinnati.

R. A. Applegate, the postmaster of Alpha, New Jersey, disappeared—after a life of crime that included selling two-cent stamps for three cents to innocent foreigners.

Mme Schumann-Heink, the famous opera singer, stepped on a nail at the Metropolitan Opera House while singing the part of a Rhine maiden. She was treated by a physician who, summoned from his box, warned that she might get blood poisoning.

John D. Rockefeller sr. took the choir of the Baptist Church of Lakewood, New Jersey (two carloads of women and one tenor), on a philanthropic picnic. He treated them all to ice cream sodas and had one himself.

I acquired this special knowledge after coming upon an advertisement for "The Birthdate Newspaper," which offered complete issues of papers published the day you were born. Sending away for issues of March 28, 1907, I looked forward to some meaningful conjunction between my birth and, say, the settlement of a grave international crisis or, better still, to the discovery in some headline of an omen that might perhaps foreshadow the course of my own life.

When I phoned for my own birthdate newspaper, I got into a conversation with the manager of something called Historic Newspaper Archives, which runs the service. The bulk of its stock comes from libraries that have put newspaper files on microfilm, and includes such items as the *Fargo Forum* (North Dakota, 1898-1955) as well as the London *Times* (1793-1987), the *Bombay Times* and the *Fiji Times and Herald*. Tens of thousands of birthdate papers are sold each year, starting at $34.50 apiece, in addition to those marking weddings and even days on which people got their first jobs.

At first I was disappointed. Aside from my own part in it, I can honestly say that the recording of history on March 28, 1907, seemed about as non-epic as this century has seen.

Salvador's army was reported to have won some skirmishes in the war against Nicaragua. A revolutionary's bomb landed two feet from a Russian admiral but failed to go off. A commission was determining whether Harry Thaw was insane after shooting Stanford White. Harry Payne Whitney's speeding chauffeur was arrested for going 25 mph on a New York boulevard, while Mortimer Schiff's valet got arrested after writing love letters to Mrs. Schiff. Big Jule, a Central Park Zoo elephant, was cured of a pachydermatous stomachache when, after mustard plasters and a gallon of castor oil had failed, she swallowed four quarts of whiskey.

All this was hardly epic. And nowhere could I divine an augury of my own fate. Slightly downcast, I was about to pass an item headlined "Geese Saved by Cackling" when some instinct made me read on. Early in the morning, the story said, a gang of young Brooklyn men in a carefully planned raid on the goose preserve in Prospect Park had rowed out to a little island in a park lake, trussed up a dozen geese and ducks and made off for a poultry market. As they were surreptitiously climbing the park fence at Tenth Street, the geese began to cackle. "The lads dropped the cackling geese and squawking ducks," the newspaper reported, "and sprinted down Tenth Street," their criminal deed thwarted.

This was the answer to my quest—a forgettable story of urban poaching to most people, perhaps, but not to me, for, only half a dozen blocks away on 16th Street, at the very time people were reading about it, I was being born! As if to clinch the connection, it reenacted one of my favorite stories in one of the favorite places of my childhood.

I don't know how many times I read and reread the famous story of the alarmed geese that aroused the Romans to the barbarian attackers or how many times my friends and I, carrying our ice skates through Prospect Park from the lake with that little island in it, climbed that park fence at Tenth Street—simply because it was more fun than going out the gate. Nearby was the big greenhouse where we used to see a real banana tree miraculously sprout real bananas, and then we'd walk over a hill on a foreboding wooded track we called the "Indian Trail." When we emerged, scared but safe, we would go past the bench where, almost every day in every season, a reassuring old gentleman sat, wearing plain clothes, a benign expression and hair down to his collar. He was a Quaker, we knew, and was 128 years old.

Maybe I was grasping at the straws of history but as I read I felt there must be meaning in this coincidence. I may even find a moral—perhaps my guiding faith that nature and right will eventually triumph—in the parable of me and the geese: how the geese, with their frantic cackles, and I, with my newborn cries, were calling the world's attention to ourselves as I was making an entrance into my own history, which, some days, seems to me almost as ancient as Rome's.

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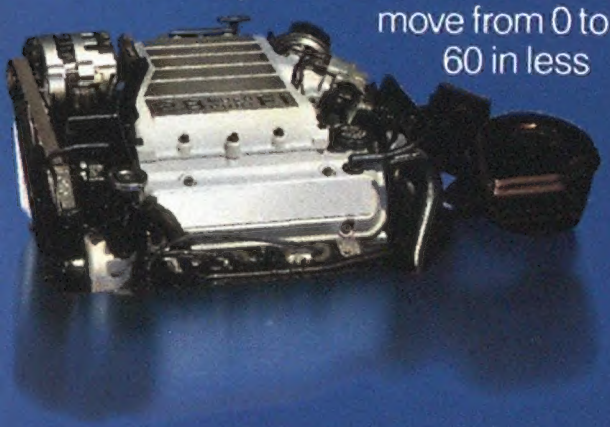

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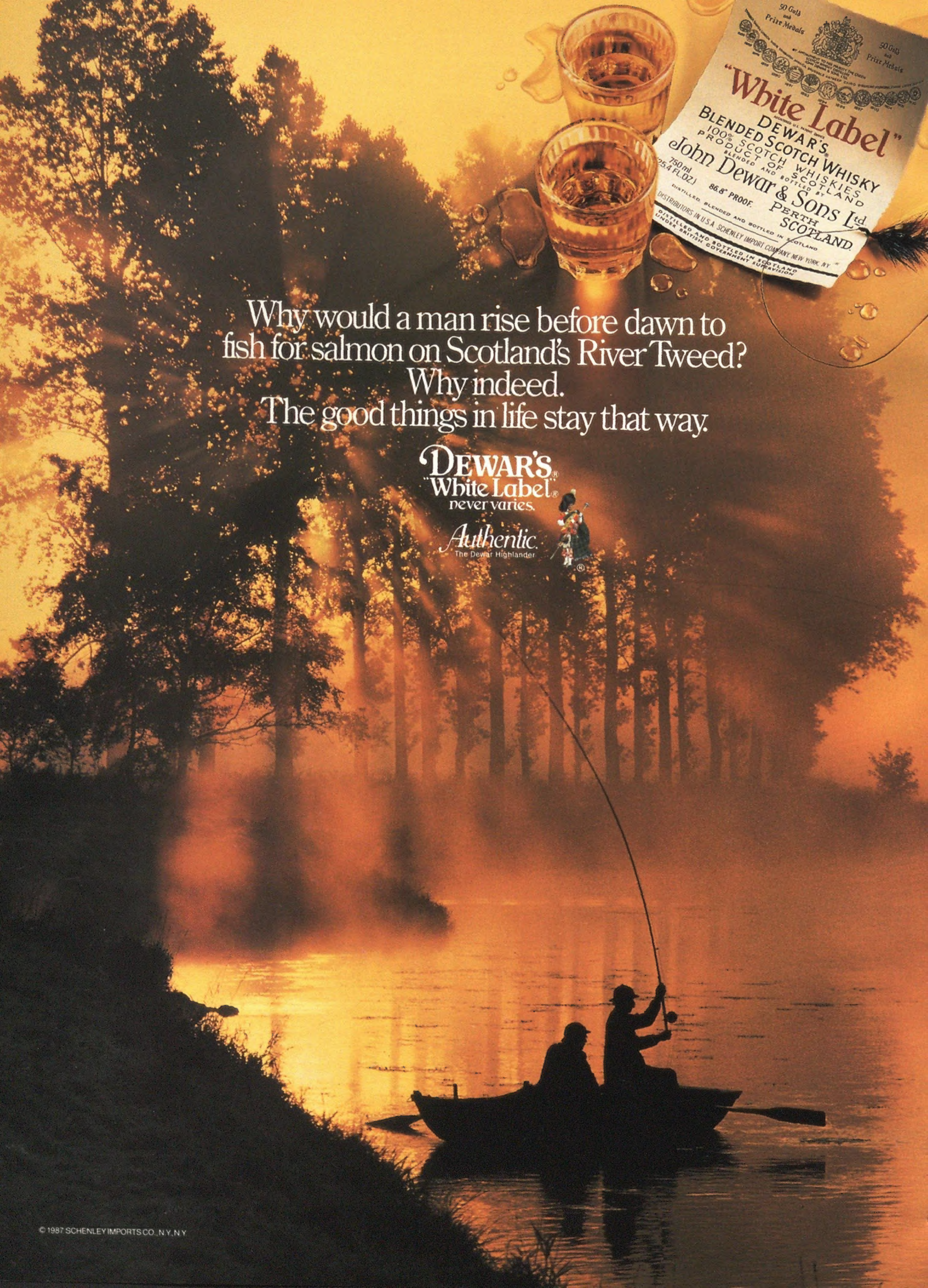
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